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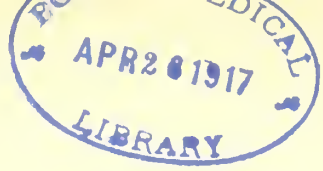




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THE JOURNAL OF THE TENNESSEE STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

ISSUED MONTHLY, under Direction of the Trustees

PERRY BROMBERG, M. D., Editor and Secretary

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PRESIDENT'S ADDRESS

"THE NECESSITY FOR A FULL ORGANIZATION OF THE MEDICAL PROFESSION."

By O. Dulaney, M.D.,
Dyersburg.

Mr. Chairman and Gentlemen of the Tennessee State Medical Association: Before beginning to discuss my subject for this evening, it would be well to first state to you that I cannot command words to express my high appreciation of the honor you have conferred upon me by selecting me to the highest office in this Association. I am mindful of the responsibilities of this office, and I have tried to serve you diligently and impartially. That I have made mistakes, goes without saying, and before finishing my remarks perhaps quite a few of you will think that you have made a more serious mistake by selecting me to make an address on an occasion of this kind. But as you have assured me of your confidence and esteem, I only hope that I may be able to show my appreciation by renewing my efforts in the future to the upbuilding of the medical profession from every standpoint.

It seems appropriate that my address should, at this time, be a plea for a general increase of members; also in the attendance of the meetings of the medical societies and a more systematic co-operation, which is essential if we expect to reach the highest ends in medicine. It is necessary for all of those who are devoting their time to special branches in medicine to meet together and re-

late their observations, to utilize and correlate their ideas and thoughts which is essential towards progress.

Already there has been a tendency to a wide separation. Each others' observations have been unrelated and this has been a serious impediment to progress. The needs for the specialists, internists, dentists, pharmacists and health commissioners are indispensable and the purpose of the medical society is to encourage higher ideals and make practical the utilization of our knowledge and to encourage a closer professional relation which is far better for the physicians and also the people.

The medical society has been the cause of the greatest progress of civilization since the early centuries. There is no advance which compares in its influence on the happiness of mankind with its increasing power to lessen physical suffering from disease and accident and to control the spread of pestilences. I can truthfully say that the American Medical Association has been one of the principle factors in the wonderful progress made in preventive medicine, medical education and, in fact, in all lines of medical endeavor.

1913 marks a new era of progressiveness. When Woodrow Wilson was inaugurated President of the United States on March 4, it was a great demonstration of the people's ideas at that time. They are awakening as never before, and while the science of medicines in the last decade has progressed marvelously—even beyond the expectation of any of the pioneers of medicine—yet it has reached

a stage where it is but an infinitesimal part of what it will be in the new progressive era.

Preventive medicine has a characteristic history and only in the last decade has startled the world to an immeasurable degree. It is one of the most essential elements in the progress of humanity and the basis for a great work. Wonderful discoveries have been made, yet unrealized by men, while they are of incalculable benefit to mankind.

Gentlemen, these questions come to us today: "What are our County and State Societies going to do?" Are they going to adopt the Woodrow Wilson ideas, or are they going to follow the Taft Wing of the Republican Party? It seems that the majority of us belong to the Bull Moose gang—fail to know what we want and how we are going to get it. But it gives me great pleasure to state to you that we have one man—the editor of our State Journal and also Secretary of our Association—and while it is not my intention to cast any reflection upon the past Secretaries, I desire to speak in impressive terms of the great work done by Dr. Bromberg. He has performed the duties of his office reluctantly and the success of this Association is due almost entirely to his unwearied efforts.

Two years ago our Journal was about to pass out of existence, and the matter was referred back to the County Societies. Since that time, our new Secretary, with an iron will and determination and with a broad and comprehensive vision of journalistic work, pertaining especially to medical education and medical legislation, and with but little encouragement, has made it a remarkable success. This should be most gratifying to us. Our Journal has had a new birth and has undergone changes of great importance; advanced in instruction and has passed beyond the experimental stage. It now has a solid foundation, financially and otherwise and has assumed an enviable reputation and, not too much to say, it has no superior. Summing it up in a few words, Dr. Bromberg is a successful editor and a most excellent Secretary and a gentleman of highest type, and I desire to express to him publicly my sincerest thanks, and assure him of my kindest appreciation which he so honestly deserves. While quite

a few of the other officers have given the Association their active support, others perhaps have been a failure. This should be left for them alone to judge.

We are indeed indebted to the local society, the Committee of Arrangements and also the Scientific Committee for their time and energy spent in arranging this splendid program, and I am exceedingly glad to be one of you to receive such a hearty welcome to this great and hospitable city. It is my earnest desire that you may find the program interesting, profitable and enjoyable. What is more pleasant to us than to see so many of our profession here to avail themselves of the opportunity of gaining new thought? This alone should encourage us and by exercising our fraternal relationship, it elevates the standard of medical education, legislation, and promotes the art and science of medicine in all of its branches.

The greatest problem confronting us today is the lack of interest taken in our County and State Societies. This is a matter of primary importance. It is hard to realize that each officer and each member of the Society has a special duty to perform and their failure to perform this duty, leads to the cessation of life in the entire organization. The County and State Societies, when taken together collectively, perform a great duty that is vital to the integrity of the human organism and which is undoubtedly of great economic value to humanity. It is through the influence and guidance of our great medical societies that we have accomplished most.

The Society meeting gives us an opportunity to know each other more or less intimately; of meeting members of the profession and to relate our professional experience; to mold and develop the character of professional life and to enrich the mind from association with men of broader scientific views. By attending the meetings and hearing the opinions of others, it will help to inspire you and help you to realize the existing forces in the professional growth from every standpoint. While the plan outlined by the American Medical Association is almost perfect and by your intelligent application of the ideas suggested by the greatest known men of our

profession and by the completely changed attitude of the physicians, it has secured for them the most needed legislation; promoted medical education and our medical colleges are no longer run on a commercial basis. The American Medical Association opposes quackery in every form. We look upon it today as a great supervisor and the forerunner of higher ideals and it has a tendency to stir us to do better work and keep alive the interest of the medical societies. Every individual physician should feel a keen responsibility and an interest for carrying out its high ideals and purposes. It is highly important that the officers of the County and State Societies should feel that responsibility and the success of this Journal depends more upon them than any other set of men.

You have been honored to your positions, and the growth of our societies and our journals depend upon a concerted effort on your part, and it is only by an aggregate influence and the assistance of every medical organization that we receive the desired and essential influences which enable us to comprehend measures of the greatest practical value and only by intercommunication are we able to destroy certain evils.

The first duty of the physician is to join the local County Medical Society and he should attend its meetings under all circumstances. Whenever placed on the program for a paper, make it your duty to respond, even though it may be your first time after leaving school. Do away with the idea that the older members of the profession will criticize you for making mistakes. We all make mistakes. It will be quite an effort to comply with the first requests, but he who never tries, never succeeds. The steps that you take in your County Society are only stepping stones to greater work. It gets you in the habit of doing things and will cause you to have confidence in yourself. Be charitable and devote at least a part of your time in associating with the old and decrepit physicians. This alone will be a great inspiration and will encourage you to be better men.

This society should, at this meeting, take a more progressive stand in connection with the conservation of the health of the people of

Tennessee. In order to encourage a closer relation and place each other in an advisory position in matters of legislation, we have invited a member of each of the different organizations to address our society in the interest of the progress of humanity. Our problems are one and our successes are dependent one upon the other and our chief aim is to relieve suffering humanity. Specialization in medicine has developed and progressed. While they are recognized as separate branches, we are working to one end and a common cause. Closer ethical relation will have a tendency to solve the greatest problems and strengthen each others respective field of labor. We will receive a concerted action in matters of legislation and will have each others sympathy and support.

Our State Board of Health is an important factor in educating the people to the needs of preventing disease which is of great economic value to them. No greater duty can be performed by men than to faithfully fulfill the purposes of the offices to which they are selected. The success of medicine in the future will depend largely upon the city, county and—most important of all—the state health officers. They are to be the judges, and it will be left to them to settle questions of the greatest importance to human welfare. By keeping a more compact and efficient record and causing the physicians to make a more detailed and accurate report regarding diseases, births and the causes of deaths, medicine in the future will be on a more efficient basis. Medical schools should prepare men especially to fill such places, as this is a science almost unto itself. It is our duty to aid them in all measures and needed legislation in combating disease for the protection of the people.

The dentist comes in for his part in the progress of humanity. He too is an essential factor and it is only by our combined efforts that we are enabled to accomplish the best results from the injurious effects of adenoids. By his appliances and methods of surgery in which he is so wonderfully skilled, he is able to give the cosmetic relief to the individual sufferer. He is an important adjunct to the specialists in the diseases of the stomach, etc.,

and by his special care of the teeth, he has aided much in the relief of the sufferer.

There are common interests existing between the physicians and the pharmacists. I am afraid that we have been somewhat the cause of the pharmacists drifting a little towards the idea of commercialism. We have almost lost sight of the fact that they really know how to fill an intelligent prescription and some of us have been too prone to prescribe proprietary remedies on the account of their being more palatable but are far less efficient than the one that could be prescribed by an intelligent and practical physician.

There is a tendency to take too much liberty in their places of business and it should not be expected of them to furnish drinks, and keep the medicine cases thoroughly filled with every necessary article for the common practice. Even offices have been furnished by them without compensation. Gentlemen, this is wrong in the face of it. The druggist owes you absolutely nothing, neither do you owe him anything. It is a separate and distinct speciality and you should consider it so. You should encourage them to become more proficient. What inducement can we offer to young men to spend three years in the schools of pharmacy when such conditions as referred to exist? Let your patients carry their prescriptions where they will. Educate them that the best is the cheapest at all times. Lay aside selfishness and place merit above all.

The druggist, too, has his faults which we should condemn—substituting, counter-prescribing, rebating and furnishing physicians free offices, showed that and does not meet with the approval of the best men of our profession. This is not right and it matters not what you may think or say, the majority are against you. There is good and bad in all of us and each profession should do its part to strengthen and aid in the advancement and building up the weak places.

The first matter to condemn is those who are encouraging people to become addicted to the narcotic evil. To refer to them as physicians and pharmacists would be a misnomer. They should be scientific in every particular and a healer of the physical being, but the

narcotic encourager is the most dreaded man known to the people or the profession. They should be recognized as destroyers of human happiness and integrity. They also destroy the most vital functions that are important to human progress. They are the inventors of hallucinations and all sorts of crimes and the invertebrate should be stamped as a moral coward and a degrader of the medical profession. I desire to state to those of you present that the medical society and its representatives are opposed to such practice and it is our object and purpose to educate you against such evils.

As to whether the Harrison Narcotic Bill now in Congress meets with your approval, or whether it is sufficient to cover the subject, I am not here to say, but I will frankly state to you that this evil should receive at least a part of our attention. Some physicians desiring to make haste in their calls, are too quick to resort to their needles, and pretty soon the patients demand it. This physician has then destroyed the happiness of the family; the beautiful sentiment of a loving and affectionate mother, a dutiful wife and a woman devoted to her neighbors and church affairs, a leader in social circles. Let me ask of you, has this man been practicing the art and science of medicine? No, he has reached the most deplorable state of affairs—a destroyer of home, peace and happiness—too vile a creature to receive the consideration of decent people. Think of the men that you come in contact with in your daily practice who will lie, steal and resort to all sorts of methods to obtain some drug that will produce the effects mentioned in my previous remarks. While we are unalterably opposed to such practice and condemn it in the severest of terms, we have done little to correct it. We must correct this evil. Lend our efforts and influences to any legislation, and if necessary, as a last resort, stamp it out by publicity. This is one of the evils that calls for a full organization of the medical profession.

In this state there may be a few young men who may not have a real conception of the wrong done by fee splitting and how such procedure may terminate. There might be some excuse for them, provided they desire

to correct matters, but the other fellow, who maliciously and willfully makes a practice of fee splitting for his own special benefit and knows at the same time that he is unethical, has lost sight of the high ideals of the profession. He is stamped by the best men of our profession and by our medical societies as a being without proper manhood. With a cowardly principle and with his grafting ideas, he sneaks about advertising to get patients and robs the people of one of the greatest and most sacred privileges that they can possess. The people are robbed of the last blood in their veins by these eager grafters who are medical degenerates. I will refrain from making any more remarks for fear that I might express my real sentiment in regard to them.

Recently I have received several communications in regard to contract practice and its influence in Tennessee. In my section of the state there is little contract practice carried on, with the exception of the railroad surgeons. They have a schedule fee bill specifying what are allowed for certain operations. The other is a large mill which employs a surgeon, and the contract is pretty liberal.

Contract practice, in our code of ethics, is considered unethical, and a man doing this class of practice is not eligible to membership in the County or State Medical Society, except in a few isolated cases, and then it should be agreeable to every member of the local society. You will find quite a few differences of opinions in regard to contract practice but, gentlemen, whatever you may think about this matter personally, it does not meet with the approval of the best men of our profession and, summing it up in a few words, it destroys the principle of ethics. So if it is considered wrong by the best of men, it is far better to follow in the shadow of the best than to remain in content with the worst.

It is frequent for patients to bring suit against physicians claiming mal-practice. In many instances, they are led to do this by some quack lawyer who agrees at the same time to take the case on the commission basis. It matters not whether you are successful in the case or not, it involves a great deal of expense, loss of time and considerable work.

It always has a tendency to prejudice the people against the physicians and it is nothing but right that this society should follow the steps of other states in adopting medical defense and assess each member a reasonable fee for such protection. It is not my idea to go into details, but to merely mention this for your consideration, for it certainly is a needed and desired measure which should be adopted and would have a tendency to relieve the physicians from humiliation and financial embarrassment, which so often occurs. I believe it would do much to increase our membership. This idea is no longer an experiment, but thoroughly practical and will answer for the purpose desired.

Our State Legislative Committee has certainly done diligent work in regard to matters of legislation, and their efforts should be received by the members of this society with heartfelt gratitude.

From the attitude of the physicians in regard to the County and State Medical Societies, I am reminded forcibly of the joke that was told of Ex-President Roosevelt during the campaign, and I believe we are trying to follow his example. We have been trying to make our Secretary sing bass for the entire organization. But, gentlemen, this bass voice without some assistance will get a little husky after a while and will necessarily have to have some support. The County and State Societies have certain things assigned to be done which are necessary, and the truth of the matter is that our society is merely scratching the surface. We should make the county organization the principle asset in the State Association, as this is the place to educate the individual and to teach him to realize the crying needs and conditions of the work.

It is not necessary for a physician to literally sell himself to be worth something to his society, but by spending a few minutes each day and a few hours one day in each month, you will find him educating himself to the conditions, and those of you who really work, may feel that your efforts are not appreciated, and that no progress is being made, but unconsciously you have been laying a better foundation which will eventually show results and after all, more profit than loss.

The American Medical Association has twice honored members of our Association by selecting them to the presidency of the greatest organization known for the benefit and progress of humanity. They were not elected on account of their being Tennesseans, but because of the great work they have done in the interest of our medical societies. They were men of great experience and the life of devotion that they lived, and on account of their high intellectual ability and scholarly attainments, they have won for themselves in our state, esteem and a most enviable reputation.

The contrast of medicine and its purposes at the time of the founding of the American Medical Association and at the present time is startling and shows the height to which humanity can rise. Quite a few of its members are laboring and showing wonderful zeal in its success. You can occasionally hear some remark that the results claimed by the American Medical Association are exaggerated, but this is done solely from ignorance, for no intelligent man can make such a statement. To make the American Medical Association a success, let me again emphasize that the State and local Societies are the essential factors for educating and training, and the place to get rid of the practical difficulties which so commonly occur among the physicians. A well growing membership is an inspiration to any medical society. It is necessary for the officers to attend regularly to keep themselves in close touch with their work, and if they cannot do this, they should resign, for as stated before, their failure to do their duty, necessarily leads to the cessation of life in the society.

While the majority have not been as active as they should have been, yet there has been an unquestionable progress made throughout the country, and especially in the South. The Southern physicians are no longer wandering away from home for a better chance in life, but are now beginning to settle down. We are reaching a period of an equilibrium of opportunities. It is expressing itself in a hundred different ways, both intensive and extensive. All this means greater efficiency and with the rapid stride in education, marks the

last decade a period in history that stands out by itself. Almost all branches of work are nearer equalization in every part of the country than they ever were before. The South is now working out its own problems and is proving its ability, not only in an educational, industrial, commercial and agricultural way, but in governmental affairs. I cannot recall any people who have made such wonderful progress and have reached such success within the last few years. The great wave of patriotism has swept everything before it. In other words, we have achieved a unity of purpose. We have labored against tremendous handicaps and in the future, with such a diversity of conditions, we will succeed as never before.

The South should be proud of its medical institutions. They are fast comparing with any in the country. They have had many difficulties to overcome on account of the preliminary requirements and the masses of the people not being as well educated as those of the North and East. While we have not had compulsory education; but taking every thing into consideration, our medical institutions have made more progress than any others known to us. They are no longer run for profit and individual gain, but for the purpose of educating men and training them to be intelligent and practical from every standpoint. It is the duty of every physician to co-operate with the medical schools in every way for their betterment. They are essential and we should do everything in our power to make Tennessee's medical schools the very best.

The hospital facilities throughout the South are rapidly increasing; laboratories of different kinds are increasing in great numbers. Quite a great deal of research work has been done by Southern men in the past few years, and this alone should stimulate Southern interests as never before. We have problems that concern the South and the South alone, and some of the diseases can be better mastered by Southern men.

We should encourage our State Boards of Medical Examiners in the great work that they are doing toward establishing reciprocity between the different states. For they

certainly have done much towards elevating the standard of medicine.

The Southern Medical Association has a magnitude of purpose and will accomplish great results from encouraging a closer and more united relation between the Southern State Societies. It has a great duty to perform and has a mutual interest in all of the Southern physicians. This organization is unquestionably a great and wonderful motor and will solve many of the problems of the South, and display the intellect and genius of our most skilled men.

That brings up the question: "What is Tennessee going to do towards taking a progressive stand and to mark an era of success in our own affairs?" The progress of medical science has kept apace with the progress of invention, and within recent years has startled the world with knowledge that seems superhuman. The physician who does not fully appreciate the tremendous responsibilities of his high calling in the medical world, is unmindful of the serious fact that he is identified with a body of men who are the peers of any class of men in the world. The physician is a benediction to mankind. The movement now must be to elevate still higher the rank and file of the society and seek men who will live to its exalted standards. And my wish is for our steady advancement in all good endeavors.

MINUTES—HOUSE OF DELEGATES.

The House of Delegates of the Tennessee State Medical Association was called to order by President Dulaney at 2:00 p.m., Tuesday, April 8, 1913.

The first order of business being the reading of the minutes of the last meeting, the President asked the members if they desired the minutes read.

Dr. McCabe: Is there anything important in the minutes of last year's meeting?

Secretary Bromberg: There are a few things growing out of the minutes of last year's meeting that are to come up, but as the minutes were published in the May (1912) Journal, all of the members are probably familiar with them and they will be duly brought up. I think it would be a waste of time to read

these minutes and bring the matters up for discussion now, and I move that the reading of the minutes of last year's meeting be dispensed with.

He was seconded, and the motion was put and carried unanimously.

President Dulaney: The next order of business is the appointment of the Nominating Committee, and I suggest that the delegates from each section of the state get together and make their nominations for candidates for the state officers for the ensuing year.

Dr. A. B. Cooke: It is customary to take a short recess, to enable the delegates to get together and select their candidates, and I move that we have a five-minutes' recess for this purpose.

His motion was seconded, the question was put and carried, and President Dulaney then declared a five-minutes' recess to allow the delegates to select their candidates.

The meeting being called to order at the expiration of the five minutes, reports were called for by state divisions, and they reported as follows:

Nominating Committee for Middle Tennessee: H. M. Tigert, of Nashville, Chairman; Walter Dotson, of Gallatin; W. C. Bilbro, of Murfreesboro.

Nominating Committee for West Tennessee: A. B. Deloach, of Memphis, Chairman; E. T. Haskins, of Newbern; J. W. McCall, of Huntingdon.

Nominating Committee for East Tennessee: C. B. Wiley, of Chattanooga, Chairman; S. R. Miller, of Knoxville; C. J. Broyles, of Johnson City.

Reports of officers were then called for, and the Secretary, Dr. Perry Bromberg, of Nashville, read his report as follows:

SECRETARY'S REPORT FOR YEAR 1912-13.

To the Officers and Members of the Tennessee State Medical Association.

Mr. President and Gentlemen:

Appended hereto will be found a complete financial report of the Secretary's office, which will show that the office has been conducted with due regard to economy, yet at the same time our plans have been liberal.

It would be impossible for me to convey an intelligent idea of the enormous work which has gradually grown upon the office in a report such as this, but we have consistently discharged the

duties, in an effort to establish the State Society upon a firm basis and bring into the organization every available doctor in Tennessee.

Our efforts along this line have not been as successful as we wished. However, during the year the following counties have been organized or reinstated, the latter having once maintained an organization which died out for lack of support: Organized, Grundy County; reinstated, Carroll and Lauderdale Counties.

We have perfected a system by which we learn the name and address of every doctor living in a county, whether organized or not. We wrote the following letter to those men living in organized counties who were not affiliated with the county society, and sent them a copy of the Journal:

"Dear Doctor: We note, with regret, that you are not a member of your county medical society, and write to ask if you won't start the New Year by joining? The state dues are only \$2, and includes subscription to the Journal, which is now one of the best in the country. Won't you help us increase our membership this year? The fee is very small and you owe this much to organized medicine.

"We are sending you, under separate cover, a sample copy of the Journal and would request that you see the Secretary of your county organization, whose name you will find in the County Society Directory of the Journal, and become a member.

"With best wishes, I am,

Yours very truly."

We were not content with this effort and wrote to each Secretary of the county organizations and urged them to invite these men to their meetings; the following letter was used:

"Dear Doctor: I am taking the liberty to write you in the interest of the medical profession of this state and desire to place a few facts before you for your special consideration:

First, there are 3,305 doctors in Tennessee.

Second, probably 1,000 of these belong to other schools, such as, Electrics, Homeopaths, Osteopaths and colored physicians, leaving approximately 2,300 regulars in the state.

Third, less than 1,500 are members of the State Society.

Now, doctor, is this condition not in part due to your neglect? There are 96 counties in the state, 60 are organized, 55 of them have reported and five have not. Is your county properly organized? That is, have you every available member in your community, and have you tried to collect his dues?

Lastly, let me ask that you assist me in making your Journal a success. Send me the reports of your meetings. Tell me of the doings of your doctors. Send me the time of your meetings. Keep me posted as to marriages, births, deaths,

removals, etc. In fact, write me often and I will do my level best to give you a courteous reply.

Now, doctor, as Secretary, it is your duty to do this. If you haven't the time, let your fellows select someone who has. Don't you think this is fair? Duties voluntarily assumed imply an obligation. Are you discharging the obligation you assumed when you accepted your position?

Now, doctor, let me suggest that you pin this to your desk: First, collect all dues and forward them promptly to Dr. Bilbro. Second, see or write every available man and get him to join your society. Third, invite outside men to meet with you and stimulate a feeling of interest. Fourth, get up a luncheon or barbecue or something else and break the monotony of uninteresting meetings, and invite all of the doctors to attend. Fifth, remember the Journal always."

Feeling this to be still insufficient we wrote to each President of the various county societies and enclosed a list of the names to whom we had written, and requested him to read our letter before his next meeting, pro-rating the names amongst his members and urging them to persuade these men to become affiliated with the state and county organizations. The following letter was sent:

"Dear Doctor: I am taking the liberty to write you, as President of your County Society and to call your attention to the fact that there are a good many doctors in your county, a list of whom I am enclosing, who are not members of the County, State or American Medical Association. We are making a strenuous effort to increase the membership of those counties now organized and doing good work and to organize the non-affiliated counties in Tennessee.

You and your members are no doubt aware of the fight being made by the American Medical Association for a National Department of Health, for the improvement in medical education, and through various other committees, are bending every effort to improve the medical conditions in America and are surely entitled to the full support and co-operation of every reputable doctor.

The State Association is now making an effort to put upon our statute books such laws as will best protect the interest of the profession, as well as the public, and is entitled to the full assistance of every self-respecting physician in the state. I feel quite sure that if you will read this letter at your next meeting, your members will see this as I do, and will co-operate in an effort with us to get non-affiliated doctors to join us. They owe it to their profession, even though they profit nothing whatever from attending society meetings, reading and discussing papers or receiving a Journal.

Kindly give this your attention, doctor, and bring it before your society at their next meeting, and if I may offer a suggestion it is; that you divide this list amongst your members, hav-

ing each to promise to see one or more on the list and secure his membership, if possible.

Assuring you I shall appreciate any assistance you may render us, I am, with very best wishes to your Society."

The following list of counties reporting to April 1, 1913, show a gain in membership in almost every instance and the results along this line are indeed encouraging:

Bedford County	4
Campbell County	2
Carroll County	8
Cumberland County	1
Davidson County	17
Dyer County	9
Giles County	4
Gibson County	4
Greene County	4
Hamblen County	3
Hamilton County	9
Hardeman County	2
Haywood County	4
Hickman County	2
Jackson County	1
Knox County	12
Lake County	1
Lincoln County	2
Loudon County	1
Madison County	3
Maury County	3
Monroe County	1
Montgomery County	4
Obion County	8
Overton County	2
Putnam County	4
Rhea County	2
Robertson County	2
Rutherford County	5
Sevier County	1
Sumner County	2
Tipton County	9
Warren County	2
Washington County	1
Williamson County	2
Wilson County	2

making total increase of 149 new and reinstated members.

In those counties having no organization, we have made a consistent effort to organize, and have written each Councilor and supplied him with a list of the doctors in these counties:

"Dear Doctor: We are enclosing a list of the non-affiliated doctors in the organized and unorganized counties of your District and ask that you kindly make an earnest effort to get them affiliated. We shall write them from this office and send copies of the Journal.

We are eager to get Tennessee better organized and feel that with a little effort on our part we can easily do so.

Tennessee, I am sorry to say, ranks lowest in the United States in its membership with the American Medical Association and we should make a strong effort to bring our percentage up by urging our non-affiliated physicians to join the State Society and the affiliated and non-affiliated to become members of the American Medical Association.

If we can be of service to you in any way, do not hesitate to command us."

To Further aid and assist him we have written to the doctors themselves and asked them to either organize or join a county society in close proximity, using the following letter:

"Dear Doctor: We are writing you at this time to remind you that a new year will soon begin and to ask that you start it out by becoming a member of the State Association. If you have no county organization in your county, then join the county next to you, or better still, get your doctors together and organize a county society.

We are exceedingly anxious to have every county in the state organized, and to do this, we must get every doctor interested. We are, therefore, writing you now so that you may have from now until the first of January to get your doctors together and organize, or communicate with the Secretary of the adjoining county society and become a member in this way.

The fee is very small and you owe this much to organized medicine. The state dues are only \$2.00 per year, which includes subscription to the Journal, which is now one of the best in the country. We are sending you a sample copy of the Journal, under separate cover. May we have a line from you telling us you will join?

Wishing you much success for the coming year, I am."

We have during the year, gotten a number of inquiries from doctors situated in counties not organized in which there is no possibility of maintaining an organization, requesting membership in the State Society. We have repeatedly refused them membership and urged them to join the nearest society in an organized county to them. We think the House of Delegates should consider this particular subject and instruct the Secretary as to his duty. It is the duty of the State Society to offer every reasonable encouragement to the County Society, but it seems unfair to the individual to be kept out of the organization simply because he is situated in a county in which no society is maintained.

We cannot give an intelligent idea of the gain in new counties just organized, or the increase in membership in the counties maintaining an organization for the reason that not more than half of the counties had reported up to April 1, which is the time limit allowed county secretaries to report. In order to overcome this very difficulty the A. M. A. called a meeting of the State Secretaries in Chicago last October and it was the unanimous opinion of all that the fiscal and calendar years should correspond. In other words, a member joining a county society at any time during the year, is joining only until midnight of Dec. 31st of that year and on Jan. 1st, unless his dues have been paid, he is not a member of the State Association. On January 1st a

new roster is begun and as each member pays his dues to the county secretary, his name is sent in to the State Secretary with credit receipt as shown below. In order to prevent the mistakes which were constantly occurring, we had printed and furnished to each county secretary, the following forms for his receipt books:

No. 191..
 Received of Dr. Town.....
 a duly elected member of the.....
 County Medical Society the sum of \$. who
 agrees to have it appropriated as follows:
 Subscription to the Journal of the Tennes-
 see State Medical Association until Jan-
 uary 1, 1914 \$1.00
 General Expense Fund of the Tennessee
 State Medical Association..... \$1.00
 Local dues for 1913 of the
 County Medical Society.....

Total
 Mail to Secretary Bromberg, Nashville, Tenn.

Secretary County Medical Society.
 Issued to Dr., Secretary of
 the County Medical Society and
 to be turned over to his successor.

If this book is properly filled out and if none of the consecutively numbered pages are missing no other proof will be needed of the accuracy of your bookkeeping.

You will be obliged to give every member a receipt, because the dues of no member will be received by the State Secretary unless accompanied by the original receipt.

If this book is lost or destroyed a duplicate will be furnished at your expense only. Follow directions; use this book properly and you will avoid criticism from your own members and from the State Association.

PERRY BROMBERG,

Secretary Tennessee State Medical Association.

In order that our action may be official, we beg the approval and endorsement of this plan by the House of Delegates, with such changes in the Constitution and By-Laws as may be necessary in order to accomplish it. From a suggestion which shall follow later in this report, it will be seen that such recommendation becomes imperative.

Upon the advice of President Dulaney, a conference of the Officials and Councilors was called to meet in Nashville in October, at which time the subject of organization was thoroughly thrashed out. This conference met in an all-day session and discussed the various matters of vital interest to the Association and should be repeated annually.

From what has already been said, it will be seen that every possible method to get new members or to arouse enthusiasm in the old ones has been done. There are but two other methods

which appeals to us as being practical. First, the employment of a State Canvasser to act in conjunction with the American Medical Association, who will for a small commission from us, see these men individually and bring them into the Association if possible. This plan was also presented to the Conference of Officials and Councilors in October, and the Secretary immediately took the matter up with Dr. Craig, Secretary of the American Medical Association, and he promised to furnish us a man as soon as a suitable one could be secured. While the plan was endorsed at this meeting, we should prefer to have such instructions from the House of Delegates. The second plan is to give the member more for his money, or to offer him some special inducement. Various State Societies throughout the country have already adopted the plan of Medical Defense or legal protection in suits for malpractice and they are unanimous in praising this plan. It was my intention to discuss this plan at some length, but Dr. A. T. McCormack, of Bowling Green, Ky., has kindly consented to lay the matter before you and I suggest that the House of Delegates allow Dr. McCormack the time necessary to explain the features of this plan. Dr. McCormack has had charge of this feature in Kentucky for the past several years and his experience will be of vast benefit to us. Permit me to add that at the Councilor's meeting the plan was liberally discussed and a resolution was passed endorsing it to the House of Delegates for adoption.

THE JOURNAL.

Since our last meeting the Journal has been regularly issued in its enlarged form; it has published all the papers read before the meeting in Chattanooga, as well as selected papers read before various county societies throughout the state. A separate account for the Journal has not been kept for the reason that the business of the Association and the Journal are so intimately blended that it would be next to impossible to divorce them. We have made a consistent effort to maintain a high-class medical Journal, both in our reading and advertising pages. At the last meeting in Chattanooga, the Secretary was allowed an additional two hundred and fifty dollars with which to secure assistance. Dr. A. B. Cooke very kindly consented to accept the position of associate editor, and I desire, at this time, to express my sincere appreciation for his very able and valuable service. His editorials have been widely read and commented upon and proved an added attraction to our readers.

The Trustees of the Journal are unknown to this office, with the exception of Dr. Geo. Pettey, of Memphis. Dr. Pettey has shown a very active interest in the Journal. While we have been unable to counsel with him relative to its management, he has made personal sacrifices to secure representation from his section in our advertis-

ing pages and in this way he has rendered us valuable assistance, for which we are duly grateful.

By discontinuing the transactions we were able to secure a better contract for printing the Journal, which is now published for about one hundred and seventy-five dollars a month. The actual cost can be seen by referring to the Treasurer's report. The income from advertising is approximately two thousand, which proves sufficient to meet the expenses of the Secretary's office and other expense, including salaries, with the exception of the actual printing, which is paid by the Treasurer. The attached financial report will show in detail, all money which has been received and disbursed in this office.

The Secretary desires to express his gratitude to President Dulaney, who has always evidenced the greatest interest and whose many valuable suggestions throughout the year have been of material assistance.

To Mrs. Robinson, my faithful and efficient secretary, has been intrusted all of the detail work, and the perfect order which exists in every minor matter in the office, is an evidence of her valued assistance.

The work, as before stated, has grown to such proportion as to require the almost constant attention of the Secretary and I trust it has been discharged acceptably.

With assurance of greatest esteem, I am,

Respectfully,

PERRY BROMBERG,

Secretary.

CASH DISBURSED FOR 1913-12.

April—

	Voucher		
8 Boyd Robinson, stenographer for House of Delegates, expenses and salary	132	\$ 50 00	
12 Foster & Parkes, ledger..	133	2 00	
12 St. Louis Button Co.	134	17 50	
13 Stenographer—salary April 6 to 13	135	12 00	
17 Lebeck Bros., Stamps....	136	5 00	
20 Stenographer—salary April 13-20	137	12 00	
27 Stenographer—salary April 20-27	138	12 00	
May—			
3 H. E. Jackson, Agt., April rent	139	10 00	
4 Stenographer—salary April 27, May 4	140	12 00	
11 Stenographer—salary May 4-11	141	12 00	
14 Davie Printing Co., paste, 25; 2 files, 25; carbons, 50.	142	1 00	
14 Lebeck Bros., stamps....	143	5 00	
18 Stenographer, salary May 11-18	144	12 00	
20 The A. M. A. 1912 Directory	145	6 00	
24 Stenographer, salary May 18-24	146	12 00	

25 A. W. Willis, Postmaster, postage May Journal....	147	5 59
31 Stenographer, salary May 24-31	148	12 00
31 Stenographer, salary May 31, June 15, two weeks, on account of Secretary's absence	149	24 00

June—

1 A. W. Willis, Postmaster, June Journal postage....	150	4 76
8 Lebeck Bros, stamps....	151	5 00
15 H. E. Jackson, June rent..	152	10 00
22 Stenographer, salary June 15-22	153	12 00
22 Dr. Bromberg, refund on borrowed money; expressage, \$1.50; boy, \$1.50; twine, 10 cents; drayage, \$1.78 on transactions to members	154	4 93
29 Stenographer, salary June 22-29	155	12 00

July—

1 H. E. Jackson, July rent..	156	10 00
8 Stenographer, salary June 29, July 8	157	12 00
9 Lebeck Bros., stamps....	158	5 00
13 Stenographer, salary July 8-13	159	12 00
18 A. W. Willis, Postmaster postage July Journal....	160	4 98
20 Stenographer, salary July 13-20	161	12 00
20 Phillips Hardy, for delivering Journals and transactions in Nashville	162	2 50
26 Stenographer, salary July 20-26	163	12 00
27 W. C. Bilbro, Treas., dues F. M. Blankenship.....	164	2 00
29 Cash, incidentals as per expense account attached..	165	2 00
31 Dr. P. Bromberg, refund on borrowed money, paper and twine, \$1.30; boy, \$2. (transactions).	166	3 30

August—

1 Cash, incidentals—see expense account attached...	167	2 00
2 Lebeck Bros., stamps	168	5 00
2 H. E. Jackson, Agt., August rent	169	10 00
(Voucher 170 void.)		
3 Chadwell Transfer Co., freight and drayage on transactions	171	41 33
3 Stenographer, salary July 26, August 10.....	172	24 00
5 Brandau - Craig - Dickerson Co., plate.....	173	1 25
5 Rich Printing Co., bill-heads	174	3 25
13 W. N. Byers, Agt., commissions on adv.	175	10 50
14 Herman, Morse, commissions on collections	176	4 00
16 Dave Morse, commissions on adv.	177	5 50
17 Stenographer, salary Aug. 10-17	178	12 00
23 A. W. Willis, Postmaster postage Aug. Journal....	179	4 66
24 Stenographer, salary Aug. 17-24	180	12 00
25 Dr. P. Bromberg, stamps		

	for Nashville Journal	181	3 00	12	Cash, incidentals—see ex-		
26	Lebeck Bros., stamps	182	5 00		pense account	222	3 00
31	Stenographer, Aug. 24-31 . .	183	12 00	January—			
September—							
5	H. E. Jackson, rent office . .	184	10 00	2	H. E. Jackson, Agt., rent . .	223	10 00
14	Stenographer, salary Aug. 31, September 14	185	24 00	3	Lebeck Bros., stamps	224	5 00
16	Cash, incidentals—see ex-			4	Rich Printing Co., receipt		
	pense account	186	2 00		books	225	25 00
20	Lebeck Bros., stamps	187	5 00	6	Williams Printing Co.,		
21	Stenographer, salary Sept. 14-21	188	12 00		membership ledger	226	2 00
23	A. W. Wills, Postmaster,			6	Stenographer, adv. on sal-		
	postage, Sept. Journal . . .	189	5 06		ary month	227	15 00
28	Stenographer, salary Sept. 21-28	190	12 00	15	Stenographer, adv. on sal-		
October—							
1	H. E. Jackson, rent, office . .	191	10 00	22	A. W. Wills, Postmaster.,		
4	Lebeck Bros., stamps	192	5 00		postage, Jan. Journal	229	4 77
5	Stenographer, salary, Sept. 28, Oct. 5	193	12 00	25	A. W. Wills, Postmaster,		
9	Cash, incidentals—see ex-				postage, sample copies . . .	230	1 92
	pense account	194	2 00	27	Lebeck Bros., stamps	231	5 00
12	Stenographer, salary, Oct. 5-12	195	12 00	February—			
19	Stenographer, salary, Oct. 12-19	196	12 00	1	H. E. Jackson, Agt., office		
19	A. W. Wills, Postmaster,				rent	332	10 00
	postage, Oct. Journal	197	4 55	1	Stenographer, balance on		
19	Cash, incidentals—see ex-				January salary	233	25 00
	pense account	198	4 00	1	Dr. P. Bromberg, Secre-		
28	Stenographer, salary, Oct. 19-27	199	12 00		tary's salary in part	234	300 00
28	Lebeck Bros., stamps	200	5 00	6	Lebeck Bros., stamps	235	5 00
November—							
2	Stenographer, salary, Oct. 27, Nov. 2	201	12 00	7	Cumberland Press, station-		
2	H. E. Jackson, Agt., rent,				ery	236	16 65
	office	202	10 00	8	Stenographer, adv. on sal-		
7	Cumberland Nat'l. Bank—				ary	237	15 00
	refund on Gleaves' check,			13	Remington Typewriter Co.,		
	which was rejected	203	5 00		plain typewriter paper	238	1 45
9	Stenographer, salary, Nov. 2-9	204	12 00	15	Stenographer, adv. on sal-		
11	Dr. A. B. Cooke, Associate				ary	239	15 00
	Editor, salary in part	205	150 00	21	A. W. Wills, Postmaster,		
16	Stenographer, salary, Nov. 9-16	206	12 00		postage, Feb. Journal	240	2 27
20	A. W. Wills, Postmaster,			22	Cash, incidentals—see ex-		
	postage Nov. Journal	207	4 77		pense account	241	2 00
20	Lebeck Bros., stamps	208	5 00	22	A. W. Wills, Postmaster,		
23	Stenographer, salary, Nov. 16-23	209	12 00		balance postage, Feb. Jour.	242	2 69
30	Stenographer, salary, Nov. 23-30	210	12 00	--	Lebeck Bros., stamps	243	5 00
December—							
2	H. E. Jackson, Agt., office			March—			
	rent	211	10 00	1	H. E. Jackson, Agt., rent . .	244	10 00
2	Underwood Typewriter Co.,			1	Stenographer, balance Feb.		
	ribbon	212	1 00		salary	245	30 00
3	Rich Printing Co., station-			6	Lebeck Bros., stamps	246	5 00
	ery	213	11 15	8	Stenographer, adv. on sal-		
7	Stenographer, salary, Nov. 30, Dec. 7	214	12 00		ary	247	10 00
9	Lebeck Bros., stamps	215	5 00	12	A. W. Wills, Postmaster,		
9	Cash, incidentals—see ex-				postage, March Journal . . .	248	4 97
	pense account	216	3 00	15	Lebeck Bros., stamps	249	5 00
14	Stenographer, salary, Dec. 7-14	217	12 00	18	Parcel post stamps	250	6 05
14	Dr. Jack Swafford, commis-			22	Stenographer, adv. on sal-		
	sion on adv.	218	8 00		ary	251	5 00
14	Lebeck Bros., stamps	219	10 00	22	Dr. A. B. Cooke, balance		
14	Stenographer, salary, Dec. 14-28	220	24 00		on salary	252	100 00
22	A. W. Wills, Postmaster,			24	Lebeck Bros., stamps	253	5 00
	postage, Dec. Journal	221	4 77	28	A. W. Wills, Postmaster,		
					postage, Apri. Journal	254	4 63
				31	Stenographer, balance on		
					March salary	255	45 00
				31	Cash, incidentals—see ex-		
					pense account	256	1 00
April—							
				2	Lebeck Bros., stamps	257	5 00
				2	H. E. Jackson, Agt., office		
					rent	258	10 00
				4	Dr. P. Bromberg, Secre-		
					tary's salary, balance	259	200 00
				5	Western Union Tele. Co.,		
					telegrams to out-of-state		
					essayists	260	3 15
				5	St. Louis Button Co.,		
					badges for meeting	261	21 00
				Total			\$1,948.73

EXPENSE ACCOUNT.

Incidentals for Office.

August—

1	1 letter file	60
1	2 freight boxes for transactions.....	50
1	Davie Printing Co.	45
1	Nashville Interurban transactions to Franklin	32
3	Banner office—advertising	25
9	Express on transactions to Bolivar.....	60
14	1 ink well	30
14	Pen points	10
14	Pen Holder	25
16	Postage, cut Mosby Co.	12
17	Postage on Journals to new members..	10
31	Library paste	25

September—

4	Postage on 1 dozen Journals Dr. Gallion.	05
16	Messenger boy to deliver Nashville Journals (August)	75
20	Black ink	05
20	Red ink	05
23	Messenger boy, Nashville	
27	Journal (Sept.)	75

October—

9	Typewriter ribbon	75
9	Janitor service	25
10	Postage on Journals to New York Medical Journal	04
14	Ledger for reviews on books—Dr. Gallagher	75
15	Carbons	50
21	Messenger boy, Nashville Journal....	75
22	Cleaning office (woman)	1 00

November—

4	Commission to boy for collecting Gleeves account	50
4	Paper and twine	25
7	Ink for office	25
7	Clips	05
8	Plain paper	25
9	Yellow second sheets	75
11	Postage, 1 dozen Journals to Dr. Wylie.	05
20	Messenger boy—Journal	75
23	1 desk pad	25
29	Postage—Journals to Dr. Spradling....	07
30	Paste (library)	25

December—

7	Large envelopes—2 packages	25
9	Long sheets plain paper	25
14	One-half dozen short hand books	25
16	Plain paper	50
19	1 letter file	60
21	Messenger boy—Nashville Journal	75
28	Postage—Journals to Dr. Abel	03

January—

23	Messenger boy—Nashville Journal....	50
24	Drayage—sample copies to postoffice..	25
25	Black ink	40
29	Sponge	10
30	Pen points	10

February—

18	1 eraser	05
22	3 quires wrapping paper (pamphlets..	45
22	1 ball twine (pamphlets)	20
22	Messenger boy—Nashville Journals....	50
25	Library paste.....	25

March—

3	Rubber bands	25
12	Messenger boy, Nashville—March	75
18	Overdue postage	02

20	Drayage, Parcel Post packages.....	25
31	Messenger boy, Nashville—April	50

April—

2	Yellow second sheets	75
Total		\$21 00

CHECKS.

July 29	\$ 2 00
August 1	2 00
September 16	2 00
October 9	2 00
October 19	4 00
December 9	3 00
December 14	3 00
February 22	2 00
March 31	1 00
Total	<hr/> \$ 21 00

CASH RECEIVED—1912.

April—		
8	City View Sanitarium—adv., March	2 50
12	Armour & Co.—adv., March.....	8 33
12	Tennessee Auto Co.—adv., March.	5 00
12	Oxford Retreat—adv., March	2 50
12	DeMotive Drug Co.—adv., March.	10 00
15	Parke, Davis & Co.—adv., March (less 5 per cent).....	7 13
15	West Ellis Hospital—adv., April..	8 00
15	Lynnhurst Sanitarium—adv., Jan- uary, February, March	7 50
15	W. D. Haggard—stamps for letters for himself	2 00
16	Savoy Hotel—adv., March	2 50
16	F. A. Hardy & Co.—adv., March..	5 00
16	H. K. Mulford & Co.—adv., March (less 5 per cent).....	9 50
25	Fairchilds Bros. & Foster—adv., March and April	15 00
26	Columbus Med. Laboratory—Card, March	1 00
27	Cincinnati Sanitarium—adv., Feb- ruary, March and April.....	15 00
29	Warner Drug Co.—adv., March and April	20 00
May—		
2	Mrs. Mary R. Peyton—(nurse), card 1 issue	50
3	D. Lowenheim & Co.—adv., April.	2 50
4	Theo Tafel—adv., April	5 00
4	Shoffner Hospital—adv., April ...	5 00
5	Boyd Robinson—refund on expense account	25 00
8	Columbus Medical Laboratory— card, April	1 00
11	Tennessee Auto Co.—adv., April..	5 00
11	DeMotive Drug Co.—adv., April..	10 00
13	Parke, Davis & Co.—adv., April (less 5 per cent).....	7 13
13	Dr. F. M. Blankenship—subscrip- tion to Journal	2 00
14	Oxford Retreat—adv., April	2 50
16	Dr. K. L. Storm—adv., April.....	2 50
16	Savoy Hotel—adv., April	2 50
16	F. A. Hardy & Co.—adv., April...	5 00
18	Armour & Co.—adv., April	8 33
22	B. H. Stief—adv., March and April	5 00

12	Dr. Hilliard Wood, card.....	5 00	7	Hager-Elliott Eng. Co.—adv., Aug..	5 00	
12	DeMoville Drug Co.—adv., May...	10 00	7	Dr. K. L. Storm—adv., August....	2 50	
13	Dr. K. L. Storm—adv., May.....	2 50	9	Peoples-Tucker School—adv., June,		
17	Dr. E. M. Sanders, card.....	5 00		July and August	15 00	
19	Oxford Retreat—adv., May	2 50	9	Parke, Davis & Co.—adv., August		
19	Dr. J. Hugh Carter, card.....	5 00		(less five per cent)	7 13	
20	Hager-Elliott Eng. Co.—adv., May.	5 00	9	City View Sanitarium—adv., Aug..	2 50	
21	Armour & Co.—adv., May	8 33	10	Dr. T. G. Pollard, card	5 00	
24	Dr. W. A. Bryan, card	5 00	10	Dr. J. B. Steele, card	5 00	
29	H. K. Mulford & Co.—adv., April		10	Dr. Max Henning, card	5 00	
	(less five per cent)	9 50	10	Dr. O. S. McCown, card	5 00	
29	W. G. Bogart, card	5 00	14	Dr. Moore Moore, card	5 00	
July—						
1	Parke, Davis & Co.—adv., May		16	Oxford Retreat—adv., August....	2 50	
	(less five per cent)	7 13	16	Dr. M. M. Cullom, card	5 00	
5	D. Lowenheim & Co.—adv., June..	2 50	19	Armour & Co.—adv., August....	8 33	
6	Theo. Tafel—adv., May and June..	10 00	20	H. K. Mulford Co.—adv., August		
8	Hager-Elliott Eng. Co.—adv., June	5 00		(less five per cent)	9 50	
9	Rich Printing Co., balance on ac-		23	Cincinnati Sanitarium—adv., April		
	count	1 05		through August	25 00	
9	City View Sanitarium—adv., June.	2 50	23	Dr. L. W. Haskell, card	5 00	
11	Tennessee Auto. Co.—adv., June..	5 00	24	Cedarcroft Sanitarium—adv., Aug..	5 42	
12	Oxford Retreat—adv., June	2 50	28	Fairchilds Bros. & Foster—adv.,		
13	DeMoville Drug Co.—adv., June..	10 00		August	7 50	
13	Parke, Davis & Co.—adv., June		October—			
	(less five per cent)	7 13	1	D. Lowenheim & Co.—adv., Sept..	2 50	
13	Lynnhurst Sanitarium—adv., April,		3	Theo. Tafel—adv., September....	5 00	
	May and June	7 50	5	Dr. C. Holtzclaw, card	5 00	
13	Dr. S. T. Rucker, card	5 00	5	Dr. K. L. Storm—adv., September.	2 50	
13	Dr. Elizabeth C. Kane, card	5 00	7	City View Sanitarium—adv., Sept..	2 50	
17	Dr. K. L. Storm—adv., June.....	2 50	7	Budwell Pharmacal Co.—adv., Sept.		
17	F. A. Hardy & Co.—adv., May and			(less five per cent)	3 80	
	June	10 00	8	Memphis Hospital Medical College		
23	Petty & Wallace—adv., April, May			—adv., 3 issues	30 00	
	June, July and August	12 00	9	Oxford Retreat—adv., September.	2 50	
23	Armour & Co.—adv., June	8 33	9	Hager-Elliott Eng. Co.—adv., Sept.	5 00	
25	New Orleans Polyclinic—adv., six		10	Dr. B. F. Travis, card	5 00	
	issues	15 00	10	Dr. Wm. T. Braun, card	5 00	
25	Fairchilds Bros. & Foster—adv.,		11	Tennessee Auto. Co.—adv., Sept..	5 00	
	May and June	15 00	11	Armour & Co.—adv., September..	8 33	
26	B. H. Stief, Jewelry Co.—adv., May.	2 50	12	DeMoville Drug Co.—adv., Sept..	10 00	
31	Wm. Luigart—adv., June	10 00	12	Graduate Nurses' Asso.—adv., 1		
August—						
				year	60 00	
3	D. Lowenheim & Co.—adv., July..	2 50	14	Parke, Davis & Co.—adv., Sept....	7 13	
3	Hager-Elliott Eng. Co.—adv., July.	5 00	14	Vanderbilt University—adv., 3 is-		
3	Dr. Myrtle Frank, subscription to			sues	30 00	
	Journal	2 00	15	F. M. Blankenship, M.D., card,		
5	Dr. W. C. Eustis, Subscription to			September	1 00	
	Journal	2 00	17	F. A. Hardy & Co.—adv., August		
6	Theo. Tafel—adv., July	5 00		and September	10 00	
9	Dr. K. L. Storm—adv., July	2 50	18	Lynnhurst Sanitarium, July, Aug.		
10	City View Sanitarium—adv., July.	2 50		and Sept.—adv.	7 50	
10	Oxford Retreat—adv., July.....	2 50	19	Dr. J. S. B. Woolford, card	5 00	
12	Tennessee Auto. Co.—adv., July..	5 00	19	H. K. Mulford & Co.—adv., Sept.		
13	Armour & Co.—adv., July	8 33		(less five per cent)	9 50	
14	Hartman Distilling Co.—adv., 12		24	Fairchilds Bros. & Foster—adv.,		
	issues	60 00		September	7 50	
14	DeMoville Drug Co.—adv., July..	10 00	24	Dr. E. E. Reisman, card	5 00	
14	Dr. A. Crichton, copy of Journal..	20	29	Gupton-Sweeney Co.—adv., 7 is-		
16	Newell & Newell—adv., April	8 00		sues	39 62	
16	F. A. Hardy & Co.	5 00	November—			
20	Parke, Davis & Co.—adv., July		1	D. Lowenheim & Co.—adv., Oct...	2 50	
	(less five per cent)	7 13	1	Dr. W. F. Clary, card	5 00	
30	Dr. Jas. Sawyer, card	5 00	1	Dr. Jno. L. Jelks, card	5 00	
30	Fairchild Bros. & Foster—adv.,		1	Dr. Louis LeRoy, card	5 00	
	July	7 50	1	Dr. Gleaves (Mapleview Sanitar-		
31	Dr. W. E. Gallion, 12 copies of			ium) on account	5 00	
	Journal	1 80	4	Budwell Pharmacal Co.—adv., Oct.		
September—						
3	D. Lowenheim & Co.—adv., Aug..	2 50		(less five per cent)	3 80	
4	Dr. W. G. Somerville, card	5 00	4	Theo. Tafel—adv., October.....	5 00	
5	Dr. J. A. Gentry, card.....	5 00	4	Ward Seminary—adv., July	15 00	
6	Theo. Tafel—adv., August.....	5 00	5	Drs. Petty and Wallace—adv.,		
7	Dr. Perry Bromberg, card.....	5 00		September	2 50	
			6	Dr. K. L. Storm—adv., October..	2 50	
			6	City View Sanitarium—adv., Oct..	2 50	
			7	Armour & Co.—adv., Oct.	8 33	

9	Hager-Elliott Eng. Co.—adv., Oct..	5 00	10	City View Sanitarium—adv., Jan. .	2 50
11	Parke, Davis & Co.—adv., Oct. (less five per cent)	7-13	10	Dr. H. B. Kincaid, card, 1 year. .	5 00
12	Tennessee Auto. Co.—adv., Oct..	5 00	12	Tennessee Auto Co.—adv., Jan. . .	5 00
16	Lincoln Memorial University—adv., July	10 00	13	Budwell Pharmacal Co.—adv., Jan. .	3 80
16	F. A. Hardy & Co.—adv., Oct. . . .	5 00	13	Armour & Co.—adv., Jan.	8 33
18	Oxford Retreat—adv., October . .	2 50	16	Oxford Retreat—adv., Jan.	2 50
18	H. K. Mulford Co.—adv., October (less five per cent)	9 50	16	F. A. Hardy & Co.—adv., Dec and Jan.	10 00
20	DeMoville Drug Co.—adv., Oct. . .	10 00	24	R. L. Polk & Co., subscription to Journal	2 00
December—			26	Fairchilds Bros. & Foster, 1 issue. .	7 50
2	Fairchilds Bros. & Foster—adv., October	7 50	26	DeMoville Drug Co.—adv., Jan. . .	10 00
2	Hager-Elliott Eng Co.—adv., Nov..	5 00	28	Dr. Robt. Caldwell—card, 1 year..	5 00
3	D. Lowenheim & Co.—adv., Nov..	2 50	28	Hotel Savoy—adv., 6 issues.	15 00
3	Theo. Tafel—adv., Nov.	5 00	28	Bismarck Hotel and Cafe—adv., 6 issues	15 00
4	Jno. T. Berry & Co.—adv., Sept. and Oct.	8 00	28	Dr. A. G. Nichol, card, 1 year . . .	5 00
5	Parke, Davis & Co.—adv., Nov. (less five per cent)	7 13	March—		
6	City View Sanitarium—adv., Nov..	2 50	1	D. Lowenheim & Co.—adv., Feb. . .	2 50
6	Dr. K. L. Storm—adv., Nov.	2 50	1	Farbwerke, Hoescht Co.—adv., 1 issue	2 78
10	Drs. Crisler and Johnson—adv., four (4) issues	15 00	3	E. O. Elliott Eng. Co.—adv., Feb. . .	5 00
10	Armour & Co.—adv., Nov.	8 33	7	Gartley & Ramsey Hospital—adv., 7 issues	37 94
11	Tennessee Auto Co.—adv., Nov. . .	5 00	7	Nashville Sanitarium—adv., 2 is- sues	10 26
12	Oxford Retreat—adv., Nov.	2 50	8	Dr. K. L. Storm—adv., Feb.	2 50
14	Budwell Pharmacal Co.—adv., Nov. (less five per cent)	3 80	10	Armour & Co.—adv., Feb.	8 33
16	F. A. Hardy & Co.—adv., Nov. . . .	5 00	10	Parke, Davis & Co.—adv., Feb. . .	7 13
19	DeMoville Drug Co.—adv., Nov. . .	10 00	10	Theo. Tafel Co.—adv., Feb.	5 00
26	Fairchilds Bros. & Foster—adv., November	7 50	10	City View Sanitarium—adv., Feb. . .	2 50
26	Cincinnati Sanitarium—adv., Sept., Oct. and Nov.	15 00	11	Tennessee Auto. Co.—adv., Feb. . .	5 00
19	H. K. Mulford Co.—adv., Nov. . . .	9 50	12	Dr. O. S. Warr, card, 1 year	5 00
January, 1913—			12	Mapleview Sanitarium, on account.	5 62
2	E. O. Elliott Eng. Co.—adv., Dec. . .	5 00	13	Miss I. C. Hamburg, subscription to Journal	2 00
6	D. Lowenheim & Co.—adv., Dec. . .	2 50	14	Oxford Retreat—adv., Feb.	2 50
8	Theo. Tafel—adv., Dec.	5 00	15	Budwell Pharmacal Co.—adv. Feb.	3 80
10	Dr. Jno. Cowden, 100 October Jour- nals	10 00	15	Farbwerke-Hoescht Co.—adv., Feb.	2 77
10	Dr. W. E. McCampbell, card	5 00	15	DeMoville Drug Co.—adv. Feb. . .	10 00
10	Dr. W. S. Lawrence, card	5 00	17	Chicago Polyclinic—adv., 2 issues. .	5 00
11	Dr. K. L. Storm—adv., Dec.	2 50	17	C. V. Mosby Co.—adv., on account.	25 00
11	City View Sanitarium—adv., Dec. . .	2 50	17	F. A. Hardy & Co.—adv., Feb. . . .	5 00
11	Tennessee Auto. Co.—adv. Dec. . . .	5 00	18	Hotel Savoy—adv., 2 issues	5 00
13	Armour & Co.—adv., Dec.	8 33	20	H. K. Mulford Co.—adv., Feb. . . .	9 50
13	Parke, Davis & Co.—adv., Dec. (less five per cent)	7 13	22	Dr. A. B. Cooke, card, 1 year. . . .	5 00
13	Budwell Pharmacal Co.—adv., Dec. (less five per cent)	3 80	24	Cincinnati Sanitarium—adv., 3 is- sues	15 00
15	Geo. S. Johnson & Co.—adv., Nov..	9 78	28	Geo. S. Johnston & Co.—adv., on account	36 54
17	DeMoville Drug Co.—adv., Nov. . .	10 00	28	Bismarck Hotel and Cafe—adv., 2 issues	5 00
17	Lynnhurst Sanitarium—adv., Oct., Nov. and Dec.	7 50	29	Drs. Crisler and Johnson—adv., 3 issues	11 25
22	Petty & Wallace Sanatarium—3 is- sues	7 50	April—		
23	Chicago Polyclinic—3 issues.	7 50	1	Judge W. T. Smith, due bill on Bat- tle Creek ad.	100 00
27	University of Tennessee—4 issues. .	40 00	2	Dr. G. C. Savage, card, 1 year	5 00
27	Oxford Retreat—adv., Dec.	2 50	3	Theo. Tafel Co.—adv., 2 issues. . . .	10 00
30	Fairchilds Bros. & Foster—adv., 1 issue	7 50	4	Drs. Crisler and Johnson—adv., 2 issues	7 50
February—			4	E. O. Elliott Eng. Co.—adv., 2 is- sues	10 00
1	E. O. Elliott Eng. Co.—adv., Jan..	5 00	4	D. Lowenheim & Co.—adv., March.	2 50
4	D. Lowenheim & Co.—adv., Jan. . .	2 50	5	City View Sanitarium—adv., 2 is- sues	5 00
5	P. W. Holtzendorff—card, 3 issues .	2 50	5	Fairchilds Bros. Foster—adv., 1 sue	7 50
5	Dr. Jas. H. Atlee—card, 1 year..	5 00		Geo. S. Johnson & Co., adv., March and February	20 58
6	Theo. Tafel—adv., Jan.	5 00			
7	Dr. K. L. Storm—adv., Jan.	2 50			
10	Parke, Davis & Co.—adv., Jan. . .	7 13			
				Total	\$2,053 74

RECAPITULATION.

Total cash received	\$ 2,053 74
Total cash disbursed	1,948 73

Balance on hand April 8, 1913 .. \$105 01

L. A. YARBOROUGH,
S. W. WOODYARD,
ROBT. CALDWELL,
LOUIS LEROY,

O. K. Auditing Committee.

During the reading of his report, Dr. Bromberg stated that Dr. T. N. McCormack, of Bowling Green, Ky., who was to have been present to discuss and fully explain the Medical Defense question, was detained in Rochester, Minn., on account of the serious illness of his wife, who was taken there to be operated upon; also the delay in all trains due to flood conditions all over the country.

At the conclusion of the reading of the Secretary's report, Dr. McCabe moved that it be accepted and filed. He was seconded by Dr. Dotson, the motion was put and carried, and it was so ordered by the President.

President Dulaney then called for the report of the Treasurer.

The Treasurer, Dr. W. C. Bilbro: I have my report, but it is not at all comprehensive. It has been my custom to collect some little money at the meetings and make my report on the last day, and for this reason I would ask that the reading of my report be deferred until tomorrow or the next day.

Dr. J. W. Sanford: I move that the Treasurer's report be held over until Wednesday.

He was seconded, the motion was put, and carried.

President Dulaney: The next order of business is the appointment of a committee to audit the books of the Secretary and of the Treasurer. I will appoint Doctors Yarborough, Woodard and Leroy as an Auditing Committee to audit the books of the Secretary and of the Treasurer—Dr. Yarborough Chairman.

Secretary Bromberg: My books are all here and ready for the committee to audit whenever they choose.

Dr. Yarborough: As Dr. Bilbro's report is not yet ready I suggest that we wait and go over them both at one sitting, if agreeable.

President Dulaney: I think, also, that will be best.

The next order of business is the report of the Committee on Public Policy and Legislation, Dr. Robert Caldwell, of Nashville, Chairman.

Dr. Caldwell: Mr. President and Gentlemen: Your Committee on Public Policy and Legislation have endeavored to secure some legislation, but thus far have failed largely. I might not say largely, either, because as most of you know, we now have on the statute books, if not repealed, a Vital Statistics Law which we consider a good bill.

(Dr. Broyles: That bill has been signed.) Our most important bill, however, the Laboratory Bill, is now before the Legislature, but through a misunderstanding we failed to get it before the Legislature at the same time the Vital Statistics Bill was brought up and were not able to get it set for a special hearing, and it is probably lost so far as this session is concerned.

Our Medical Practice Act is also lost. There is no hope for it. We may get the Laboratory Bill through, but the Medical Practice Act is lost. One of the most important things in this Medical Practice law was the licensing of under-graduates; that is, only graduates of reputable medical colleges be permitted to take examinations, the point being to exclude itinerants, fakes, quacks, etc., but that is lost absolutely for this year. The outlook for its passage next session, however, is not very gloomy, and the delay will give us an opportunity to get up even a better law; that is, make every one who attempts to practice medicine of any sort pass the same Board of Examiners, whether they are to practice straight medicine, osteopathy, chiropractic or anything else, make them pass the same Board, and it seems pretty likely that we will be able to get this bill through the next session of the Legislature. Everything considered, it looks very hopeful for its passage within the next two years.

Dr. Sanford: I move we accept Dr. Caldwell's report.

He was seconded, the motion was put, and carried.

President Dulaney: We will now have the report of the Committee on Memoirs, Dr. Bosworth, Chairman; (Not present,) Dr. Brooks

(Not present.) Drs. Tigert, Walker and Brandau.

Dr. Tigert: I know of no deaths to report.

Dr. Brandau: I will report the death of Dr. L. B. Graddy, a physician well known to physicians of this and adjoining states. I do not recall the death of any others during the year.

Dr. Bromberg: A list of all deaths we learn of is always published in the Journal, and if any prominent physician dies, we try to get photographs and give a suitable write-up. In other words, the Journal has, in a measure, taken the duties of the Committee on Memoirs out of their hands.

Dr. Bilbro: I would suggest that any member present report the death of any physician they know of. We certainly should not allow the death of any physician to go unnoticed. If the Committee on Memoirs doesn't know of any other deaths during the year, and any member present knows of any, let them make report of it to the Committee on Memoirs.

Dr. Miller: I suggest that the matter be left open for the present and that the Committee on Memoirs secure the names of all members who died during the year and make a proper report of them on Wednesday. Dr. Clarence Dickerson and Dr. Blankenship died just a few weeks ago, and I would like for these two men particularly to be duly remembered. I agree with Dr. Bilbro that it is not right to allow the deaths of any of our members to go unnoticed.

Dr. Wiley: I would like to report the death of Dr. Graham, of Hamilton County.

Dr. Dotson: I move that the committee be given until Wednesday to make their report.

His motion was seconded, the motion was put, and carried.

Dr. Cooke: I move that Dr. Brandau be appointed Chairman of the Committee on Memoirs and that he call a meeting of the committee and make his report on Wednesday to the House of Delegates of any members' death.

He was seconded, the motion was put, and carried.

President Dulaney: We will now have a report from the Committee on Tuberculosis; Dr. Wm. Litterer, of Nashville, Chairman, Dr. W. R. Cochran, and Dr. B. S. Penn.

The committee had nothing to report.

President Dulaney: Now the report of the Committee on Scientific Work.

Dr. Bromberg: The Committee on Scientific Work had no formal meeting. I corresponded with the committee and got their suggestions. We followed the same plan adopted for the last two years in arranging the scientific program for the State Meeting, making it as interesting, instructive and scientific as possible, and in order to do that without slighting anyone, we issued a general invitation, published in the Journal. We received less than a half dozen responses from that source and then made up the program by special invitation, the members of the Scientific Committee making their individual selections; in other words, Doctors Crisler and Newell selected their men from the eastern and western sections of the state, I am responsible for those from the middle section, and the President of the State Association selected ten men from the state at large. We received in all forty papers, which together with the papers that came through the general invitation composes the program, which speaks for itself. We had a special paper by Dr. Allport, of Chicago, on School Hygiene, but Dr. Allport wired that it would be impossible for him to get here on account of the poor railroad facilities between Chicago and Louisville, which would necessitate his making a long detour to get here. He sent me his paper, however, and I will read it tonight, as with the President's address it composes part of the special program for tonight. In fact, every man from out of the state, except Dr. Crile and Dr. Abt have wired that it would be impossible for them to get here. Dr. Crile is here and will present his paper this evening. Dr. Abt is not here and has not sent any message expressing his regret.

Dr. Tigert: I move that the report be accepted.

He was seconded, the motion was put, and carried.

We will now have the report of the Representatives to the National Legislative Council.

Dr. S. S. Crockett: I am very anxious to make a report. They had the largest attendance ever seen in the House of Delegates of

the A. M. A. I attended without the authority of our House of Delegates, but if you care to extend me this privilege, all right, if not, it's still all right.

Dr. Tigert: I move this be made a special order of business for tomorrow.

He was seconded, the motion was put, and carried.

Dr. Sanford: Will that conflict with our House of Delegates' meeting?

He was informed that it would not.

President Dulaney then called for the report of the Delegates to the American Medical Association in 1912. Dr. Jere Crook and Dr. A. B. Cooke.

Dr. Cooke: It has not been customary for delegates to make a formal report. I imagine, too, it is well known to the members present the good work done by the Tennessee delegation at the meeting of the American Medical Association last year. I had the honor of making the nominating speech and of seeing the unusual spectacle of the unanimous election of our candidate—not a single dissenting vote was cast. If a report were made of all the good work being undertaken it would take very much more time than we have to give to it, and unless there is some special feature someone wants to inquire about, I think it would be best not to take up the time of the meeting.

Dr. Sanford: I move that Dr. Cooke's report be received, and that he be given a special vote of thanks for making such an able speech to the American Medical Association in our behalf.

He was seconded, the motion was put, and carried.

The report of the Board of Trustees of the Journal was then called for, Dr. Bilbro, Chairman.

Dr. Bilbro: I thought the Secretary of the State Association, Dr. Perry Bromberg, was Chairman of the Board of Trustees.

He was informed that Dr. Bromberg was not the Chairman, that he himself was.

Dr. Bilbro: I have no report to make. In fact, I did not know that I was expected to make a report. We have such an efficient Secretary that the rest of the Board has nothing to do. We had no meetings during the year, except one short meeting in the Secre-

tary's office here in Nashville. As I said, the Secretary and his office force are so efficient, we have had nothing to do—they look after everything for us, and there is no reason for us doing anything.

President Dulaney: It is certainly fortunate we have such an efficient Secretary.

The next order of business is the reports of Councilors. First District, Dr. C. P. Fox. (Dr. Fox is not present;) Second District, Dr. S. R. Miller.

Dr. Miller: The Second District is in about the same condition as last year. We have one county not yet organized, though we have some hope of getting it organized sometime during this year. I have written a considerable number of letters in an effort to get it organized, but they were not answered. It seems very difficult to arouse any interest. There are only about a dozen doctors in the county, however, good, bad or indifferent. Some of these have signified their willingness to have a county organization of their own if the rest will come in. I wrote to each of the Secretaries in my District, asking that they see what they could do, but I haven't heard yet whether or not they accomplished anything.

Third District, Dr. A. F. Richards. (not present).

Fourth District, Dr. Walter Dotson:

Dr. Dotson: I have no written report. I remember that last year we had a meeting of the Councilors and that each one presented a written report, but I haven't had an opportunity to get up a report for this meeting. However, we haven't done anything special in the Fourth District. We have used the mails considerably, but have not done any visiting. We have had a few replies, but not many, and we certainly appreciate the assistance the State Secretary, Dr. Bromberg, has been to us. I think we have increased the membership considerably in the Fourth. I haven't the exact figures before me, but I believe the Secretary's report will show an increase over last year, particularly since the first of April, when the last report was made. Macon County, in the Fourth District, has one of the best organizations in the District, and in the history of the county. Trousdale County is not organized, and is not likely to be; Jackson

has a better organization than ever before; there has been some increase in some of the other counties, but I haven't been able to get any response from them, and so don't know exactly how many. I expect Secretary Bromberg knows how that is. I write—and that's all. We have done all we could, and I really believe we have been benefitted to some degree.

Fifth District, Dr. T. J. Coble. (Not present).

Sixth District, Dr. Geo. H. Price. (Not present).

Seventh District, Dr. L. E. Ragsdale. (Not present).

Eight District, Dr. S. T. Herron. (Not present).

Ninth District, Dr. E. T. Haskins.

Dr. Haskins: I have no written report. We have secured some new members in the different counties, and have gotten a good many former members who were non-affiliated to renew. I think, that taken as a whole, we have done some right good work.

Tenth District, Dr. G. B. Gillespie. (Not present).

Dr. Dotson: Some of the Councilors whose names have been called are attending the meeting, but are not delegates to this convention and cannot be present in the House of Delegates.

Secretary Bromberg: The fact that they are Councilors entitles them to admission to the House of Delegates.

Dr. Cooke: Make that announcement in open session.

President Dulaney: The Councilors should have a meeting after the adjournment of the House of Delegates. It is customary, I believe, for the House of Delegates to elect their Chairman, and then the Chairman and Secretary are members ex-officio of the House of Delegates, and transact business in our absence.

Last year the House of Delegates authorized the President to appoint a man to act in conjunction with the State Legislative Committee. This is a task, however, that I would rather not attempt to undertake, and I will ask that you select your own man, and then have the House of Delegates ratify your appointment.

Two Councilors have been pretty active

during the last year, but some others have been quite inefficient. I do not want to criticize anyone, but I think it is a great mistake to appoint a man to an office in the State Society who will not take hold and make the best he can out of it. Quite a few Councilors serving this year have entirely ignored correspondence. A few have never failed to answer. Dr. Miller, Dr. Haskins and Dr. Dotson have been pretty good—not way up in G, but fairly good. Some of the gentlemen appointed last year have done great work for the Society—and some have not. There are some Councilors in the State Society who have never answered a communication, though I have written repeatedly. Let's be sure hereafter that we are electing men for Councilors who will work—and if they will not work after they have been elected, let's get rid of them. I believe that if a physician writes to me—even from California—about something that I know nothing whatever about, common courtesy requires that I answer his letter. Last year I instructed some new men that if they had more than they could attend to, appoint some assistants—as many as they saw fit. I don't know whether any of them did so or not.

Dr. Miller: I did not.

Dr. Haskins: I appointed one assistant in each county of my District.

President Dulaney: There are about 3,000 physicians in this state. About one-half of them are members of the State Association, and right now is the time we should go after the rest of them. We can't get any legislation, or anything else, unless we get busy.

Dr. Dotson: While I have not answered some of the letters I have received during the year, I have tried mighty hard to get an efficient Secretary who would. Along last fall I was away from home on a trip. I returned about 9:00 o'clock at night and opened a couple of letters from the Secretary and the President. It was too late to do anything about the matter then, and I tried to get the Secretary on the telephone to tell him what was the matter, but never succeeded.

Dr. Miller: It was my understanding last year that it was optional with the Councilor as to whether or not he should appoint an

assistant. I received the President's letter in reference to this matter, and appointed three or four and instructed them as to what they were expected to do. When I got in touch with them a little later I found that they were absolutely ignorant of what was expected of them, so thought it only a waste of time to fool with them any longer. I also thought it useless to appoint inefficient men. As soon as we learn to elect or appoint efficient men, we will begin to get results—and not until then. I, therefore, thought it best not to write to the President until I could find some efficient men—men that would take an interest in the affairs of the Association. Now regarding that unanswered correspondence, etc., I want to say that I have written more than 100 letters trying to keep up the work in my county societies.

Dr. Cooke: While we are on the subject of delinquents, what about the Board of Trustees? We are an incorporated institution and must have stated meetings of the Board of Trustees in order to hold our charter. Our Constitution expressly provides that the Board of Trustees shall meet at least semi-annually, and it is necessary that they do this in order to comply with the charter provisions. The Board of Trustees should be instructed to do this, and to take an active interest in the affairs of the Association. If the gentlemen now serving cannot do this, elect someone else who will. It is not simply an honorary office. Article 9 of the Constitution says they have absolute control of all the finances and other activities of the Journal. Such a matter as this should not be passed lightly. The Constitution is not being complied with, and we should take some action.

Dr. Bilbro: I reckon that is all meant for me, because I haven't done any work. But, as I said before, there has been nothing to do.

Dr. Cooke: No, I didn't mean Dr. Bilbro any more than any of the other members of the Board. Dr. Bilbro has been to Nashville a good many times that I know of, and he has been in the Journal office each time he was here, but there are other men on the Board who have never been present.

Dr. Bilbro: You can't get men to come to Nashville from Knoxville, Memphis, and Murfreesboro. I wrote to Dr. Bosworth and Dr.

Petty twice or more times, but they were unable to come. Doctors can't leave their practice on a minute's notice to attend a meeting at some distant point in the state. This Board should be composed of men who live close together. They could then have their meetings as often as they wanted to, and without any loss of time from their practice. If these men come from the distant sections of the state to attend a meeting of the Board of Trustees, they will have to be away from their practice for three or four days at least, and that's too long for some men to be away.

Dr. Sanford: I don't see that it is necessary to elect men from East Tennessee or West Tennessee. I move that we elect Nashville men to the Board of Trustees, and I move that we amend the Constitution to read that way. How many men compose the Board of Trustees?

Dr. Cooke: Three.

Dr. Bilbro: The Board of Trustees are simply the executive business managers of the Association. I do not see the necessity for having these three men scattered all over the state. How would it do to elect the Board from the respective sections of the state and elect alternates, either here in Nashville or some place near Nashville, and when a Board member cannot attend a meeting, let the alternate serve in his stead?

Dr. Cooke: If you'll let me say just one more word on this subject, I'll promise not to say anything more.

The members of the Board of Trustees of this Association should take at least as much interest in the affairs of the Association as the Board of Trustees of the American Medical Association. The Board of the A. M. A. go from all quarters of the globe to attend their meetings, and it sometimes requires weeks for them to make the trip. It looks to me like we could find one man in Middle Tennessee, one in West Tennessee and one in East Tennessee that would take enough interest in the State Association to attend one or two meetings of the Board of Trustees. These men have the affairs of the Association absolutely under their control. They can suspend publication of the Journal if they want to, and on office as important as this one should not go on in this way.

Secretary Bromberg: I have had a great many other things to attend to this past year, and have really paid very little attention to the Board of Trustees. However, there has been no necessity for a meeting of the Board. I have had some correspondence with them, and each one of them has given all assistance possible. Nobody has issued a call for a meeting of the Board, and I have taken the responsibility of conducting the office, spending the money, etc. My report is here to show what has been spent and what for. I have taken the responsibility, with the advice of Dr. Bilbro, of raising the salary of my stenographer and secretary, which met with their approval.

The only other expenditure to come under the jurisdiction of the Board has been approved by them. I consider the matter of raising my secretary's salary not of sufficient importance to call a meeting of the Board at Nashville, but I fully agree with Dr. Cooke that no man should accept such a position unless it is his intention to give the Association the best there is in him. I believe that if a man accepts a position on any committee, it is his duty to give that committee his time and attention, and I have always felt so; also, I believe that this Councilor right here in Nashville who has not done anything during the past year is inefficient. He has lost interest in the Society and its welfare. I refer to Dr. Geo. H. Price. Personally, I have nothing against Dr. Price, and I hope he is here. I am not saying anything behind his back that I wouldn't say to his face. I believe that when a man shows he is no longer interested, he should resign. He owes that much to the Association. I write this constantly to the County Secretaries, and tell them that if they cannot do the work, to elect someone else who will. I feel, too, that if the men composing the Board of Trustees are properly interested, they will meet when there is anything for them to do.

Dr. Tigert: I move that we adjourn and continue at eight o'clock tomorrow morning.

He was seconded, but before the President put the question, Dr. Sanford stated that before an adjournment was had, Dr. LaRue has an important matter he wanted to put before the House.

Dr. LaRue: I have an appeal from the Giles County Society to the State Association I would like to present.

President Dulaney: I am sorry, but it cannot be presented to the House of Delegates. Present it to Dr. Brandau, as Temporary Chairman of the Councilors.

Dr. LaRue: I would like very much to read it now, as I may not be here tomorrow, but if this is not possible, I would like for the Board to meet so I can give it to them. Also, I will be able to tell them anything they might want to know.

President Dulaney: No oral evidence will be admitted, doctor, it must be written.

Dr. Cooke: Section 7 of Chapter 12 of the Constitution and By-laws says: "In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts."

Dr. Miller: That is a matter that has already been discussed.

President Dulaney: When the Councilors meet, Dr. LaRue, if you will leave your appeal, they will take it up and report to the House of Delegates. I see no reason for calling a special meeting to consider this appeal.

The President then declared the meeting adjourned to eight o'clock Wednesday morning.

MORNING SESSION.

Wednesday, April 10.

The meeting was called to order by the president at 8:35 a.m.

The reading of the minutes was called for, but not having been transcribed by the stenographer, the reading was passed.

Dr. Savage: I want to bring up the matter of changing the time of our annual meeting. As it is at present, the Mississippi State Association and the Tennessee State Association both have their meetings on the same days. A resolution was introduced last year changing the date of our meeting. I suggest that we have our Secretary wire the Mississippi Association and have them hold their meeting one week earlier, and that we have ours one week later. In this way two weeks will intervene between the two meetings and there will be no possible conflict. A number of our members are attending the Mississippi meet-

ing right now—and they should be here. We could meet one week later just as well and avoid this conflict.

Dr. L. A. Yarborough: It would take some little time to wire the Mississippi meeting and get an answer. Why not make our meeting one week earlier? That was the original idea, anyway, as I understood it. We would avoid the conflict just the same.

From some little experience I have had with that West Tennessee bunch, it appears to me it would be better for us to meet on the first Tuesday in April, and wire the Mississippi meeting to have their meeting on the third Tuesday in April.

Dr. Pettey: We had this matter up in our local Society and discussed it fully. We have about fifteen or twenty members who are also members of the Mississippi Association. These men would be glad to attend our meetings, but feel that they can't cut loose from the Mississippi Association very readily. When this matter was brought up last year, there was some objection to changing the date of the meeting, but it will be very much to our interest to do so. We want to get every doctor in Tennessee interested in our meetings, and we cannot do this as long as our meetings conflict with the Mississippi meetings. Set our meeting for either the first or third Tuesday in April, and I believe we can accomplish something—and I believe the last Tuesday in March would be better than either of the other two. I know of nothing to interfere with our meeting on the last Tuesday in March.

Dr. Sanford: If there is any way in which we can get the Shelby County members to attend one of our meetings, I will second the motion. They won't even attend when we meet right in Memphis and roost on their front door step. Nashville and Chattanooga men attend our meetings, and I don't see why the Memphis men do not. Also, I don't see any use in changing the date of our meeting, except to accommodate the Mississippi Association and let some of their members come to our meetings.

President Dulaney: Dr. Pettey's resolution is out of order just now. His resolution had to lay over one year to be constitutional, and that resolution called for the meeting to be

changed to the fourth Tuesday in April. That is the question now before the House.

Dr. Pettey: I want to amend that resolution and make it read the first Tuesday in April, instead of the fourth.

President Dulaney: Will you make that in form of a motion, Dr. Pettey?

Dr. Pettey: Yes.

He was seconded by Dr. Tigert, the motion was put, and carried.

President Dulaney: We will now vote on changing the Constitution to conform with Dr. Pettey's motion.

Dr. Savage: I move that in order to give the Memphis men a little rest, we have the Mississippi Association place their meeting for the third Tuesday in April.

President Dulaney: You are out of order, Dr. Savage. There is a question now before the House.

The President then put the motion relative to changing the Constitution to conform with Dr. Pettey's resolution, which carried unanimously.

Dr. Savage: I beg pardon for being out of order. I am merely anxious for the Tennessee men to attend both meetings, and I move that the Secretary telegraph the Mississippi Association, asking that they change their meeting to the third Tuesday in April, so that two weeks will elapse between the meetings.

Dr. Pettey: Dr. Savage's motion, if complied with, will bring the Alabama and Mississippi meetings on the same day. The Alabama Association meets on the third Tuesday in April, and the Mississippi Association on the second Tuesday.

Dr. Savage: Well, make it the fourth Tuesday in April for the Mississippi meeting.

Dr. Bromberg: It seems to me that it would be rather presumptuous to ask the Mississippi Association to change their date of meeting to accommodate our members. We are changing the date of our meeting to accommodate our own members, and it doesn't appear to me to be the courteous thing to ask Mississippi to change their meeting to accommodate our men. Understand, I am perfectly willing to send the telegram, but I don't think it would be the right thing to ask Mississippi to change the date of their meeting to accommodate us.



Yours Truly

W. L. Haggard

Dr. Sanford: We are changing the date of our meeting to accommodate Memphis.

Dr. Miller: I suggest that Dr. Savage change his motion just a little. Have our Secretary wire that we have changed the date of our meeting, and merely suggest to them that they do so.

Dr. Savage: Certainly. I accept Dr. Miller's suggestion. I think that would be very much better.

The question was called for and President Dulaney put the motion, which carried unanimously.

President Dulaney: Is there any unfinished business?

Secretary Bromberg: There is nothing growing out of the last meeting, but there are a few things embraced in my report on which I would like to have the endorsement of the House of Delegates.

I have already asked that our fiscal year be constitutionally changed to correspond with the calendar year. That is, have it understood by our members that the year expires on the thirty-first of December, at midnight, and begins on January first. I will say in explanation of this feature that the American Medical Association, owing to the fact that nearly every state had a different date for the closing of their fiscal year, had to employ and almost indefinite clerical force to keep up with the expiring membership. We spent practically two whole days discussing this plan, and it was the unanimous opinion of the State Secretaries in attendance at the meeting that the fiscal and calendar year should correspond. Our fiscal year is now from April first to April first. It should be known by all the members that their membership expires on the thirty-first day of December, at midnight, and that if their dues are not paid by January first, they are delinquent. This is also necessary in order to do anything with the Medical Defense question, which I will take up later. We must have a definite time for membership to expire if we are to do anything with Medical Defense.

I move that our Constitution be so changed as to read that our fiscal and calendar year correspond—January first to December thirty-first, at midnight. The Constitution provides

no definite time for the expiration of our fiscal year.

Dr. Broyles: Read what the Constitution says about it.

Dr. Bilbro: It will not be necessary to change the Constitution, to change the fiscal year. The Constitution says: "The time and place for holding each Annual Session shall be fixed by the House of Delegates." . . . It does not say anything about the fiscal year.

Dr. Broyles: I second Dr. Bromberg's motion.

Dr. Wiley: If this is put in force, there will not be fifty members of the Society in Hamilton County on the first day of January. I am Secretary of the local Society, and I think two men had their dues paid on January first this year. It is utterly impossible to collect dues at that time, and unless we do that, I don't see how the new order will be effective. I think we should provide thirty days at least for members to pay their dues or become delinquent. If you designate them suspended for non-payment of dues, if not paid by January first, you will find that it is a mistake.

Secretary Bromberg: If I may, I would like to read the recommendations of the committee appointed at the meeting of the State Secretaries in Chicago, of which I had the honor of being a member. The report of this committee was unanimously adopted by the meeting. The recommendations are as follows:

REPORT OF THE COMMITTEE ON RECOMMENDATIONS.

The Committee on Recommendations herewith submits the following report:

1. We recommend that this conference endorse the plan of having the fiscal year coincide with the calendar year in all parts of the organization. We further recommend that secretaries of all state associations which have not already adopted this provision bring this matter to the attention of their associations and recommend its adoption.

2. We recommend that constituent state associations adopt provisions making dues in county societies payable on January 1 of each year, and requiring county secretaries to report to state secretaries all members in good standing, together with their per capita assessment for the current year not later than March 31. State societies de-

siring to do so may provide a shorter period.

3. The recommendation regarding the third question under discussion is covered by our recommendation of the second.

4. Regarding the pro-rating of dues, we recommend that this be made optional with each local society.

5. Regarding an admission fee for membership we recommend that this be made optional with local societies.

6. While the committee recognizes, as a general principle that a uniform system of blanks for county and state societies is desirable as soon as practicable, we recommend further consideration of this question at a later conference.

7. We recommend that the House of Delegates of the American Medical Association be asked to consider the advisability of issuing charters to constituent state associations.

8. We recognize the desirability and advantage of a uniform method of transfer, but this system cannot be established until there has been developed a greater uniformity in other details of organization. We therefore recommend that this question be made the subject of discussion at a future conference.

9. The committee recognizes the value of this conference to the state association secretaries, and to the purposes of organization. It therefore recommends that future conferences of this character be held.

E. J. GOODWIN, Chairman,
WILFRID HAUGHEY,
PERRY BROMBERG,
WILLIAM S. GARDNER,
FREDERICK R. GREEN.

You will see, gentlemen, these recommendations provide that the report of the County Secretaries must be received on or before March 31. That gives them three months to report in, and that is certainly long enough for any county.

Dr. Miller: The Transactions of 1904 have the very same thing that Dr. Bromberg has just been reading. March 31 has been the time limit for County Secretaries' reports ever since 1904.

Dr. Wiley: If Dr. Bromberg's recommendations are adopted and memberships expire on December 31, what about the State Journal?

Secretary Bromberg: The Journal will be continued to April first without interruption, just the same as now.

Dr. Wiley: Well, if they get the Journal just the same that's all right.

Secretary Bromberg: If you all so desire,

we can allow, say, to January 31 for members to pay their dues before being suspended.

The question was then called for, and being put, carried unanimously.

Secretary Bromberg: In keeping with the plan for the fiscal year being uniform with the calendar year, I have also adopted a uniform receipt blank, as mentioned in my report yesterday. This receipt book is printed in triplicate. The original is issued to the member paying dues, the second is torn off and mailed to me and the third is retained in the book. It prevents any mistake in bookkeeping, by either the County Secretary or my office, and when the receipt issued by the County Secretary is received, a membership card is mailed to the member making the payment—several of you present must have received these cards from my office. The idea is to have the Secretaries send their checks direct to me for proper credit, and I in turn send them on to Dr. Bilbro. They formerly mailed the same to me and sent the check on to Dr. Bilbro, which caused constant confusion. I want the endorsement of the House of Delegates on this new receipt book and system of using it. It is the only method by which we can keep absolute track of payments.

Dr. Petty: I move we adopt the uniform receipt book system as just explained by Dr. Bromberg.

He was seconded by Dr. Robert Caldwell, the motion was put, and carried.

Secretary Bromberg: There is one other matter I want to bring up that is of vital interest to every State Society, and that is Medical Defense. I had hoped to have Dr. McCormack here to explain this fully, but as previously explained to you, it was not possible for him to get here, so I will do the best I can to explain it. The majority of the states have adopted the plan of giving their members medical defense, and I was informed that it is the best thing they have ever had. It is a great attraction for members, and has drawn a great many men into the Associations that formerly were not members. It provides proper medical defense. In Pennsylvania with 7,000 members, I am informed, they provide medical defense for ten cents per member. In Kentucky, it costs the mem-

bers fifty cents each. In Texas, it costs the members one dollar each, and so on up and down. The states with the larger memberships, of course, get it for less than those who have not so many members.

I suggest that we have a Medical Defense Committee appointed by the House of Delegates and that this committee select a high-class attorney—some good, prominent man—in the central portion of the state and that he in turn select a number of attorneys in different parts of the state to take care of any suits that might be brought in any part of the state. For instance, if someone should bring suit against Dr. Wiley, at Chattanooga, Dr. Wiley would get into communication with this central attorney, who would recommend some high-class man at Chattanooga to handle the case for him and Dr. Wiley would then confer with this man and prepare his case, but this prominent attorney's advice would cost him nothing. Some states have gone even further; they not only provide Medical Defense, but provide actual damages in case of an adverse decision of the court. If a man gets judgment for, say five thousand dollars, the State Association pays it, and assesses each member \$1.50 or \$2 to make up for it, and besides paying the five thousand dollars for that member, it gives him the moral support of all the other members of the Association. Ninety-nine per cent of these suits brought against doctors are to prevent payment of bills. I am sorry our time is so limited that we will not be able to go into the details of the working of this scheme. It has worked beautifully everywhere it has been adopted, with the exception of the state of Iowa. It cost the Iowa State Society \$7,500 the first year. They had a total of eighteen suits brought against their members, at a total cost of \$7,500. This, of course, required a pretty heavy assessment against their members. I believe the Tennessee Association could provide Medical Defense for their members at a cost of not more than one dollar per member—and that is one reason why we want a definite time for memberships to elapse. It encourages members to pay their dues more promptly, and it provides protection to members of a value that is all out of proportion to the cost. I do not

know whether or not we are prepared to adopt Medical Defense, but I move that a committee of three men be appointed by the President to look into the matter of Medical Defense and present their report at the next meeting of this body.

Dr. Broyles: I want to second Dr. Bromberg's motion, but suggest that the committee report at a subsequent meeting of this present House—not wait until next year.

Dr. Savage: We should not take any final action on this question until it has been considered by the County Societies. Let's refer it to the County Societies, and if they want to adopt it, they can so instruct their Delegates to the next Annual Meeting. We certainly should not pass it without referring it to them.

Dr. Miller: Dr. Savage is correct. The question of protection in malpractice suits comes very close to me. I was recently in the midst of a malpractice suit myself—and I did not see the man but twice. It cost me \$200 in attorneys' fees alone to defend this suit. However, we want to go at the question of Medical Defense carefully. In some states suits cannot be brought for malpractice. It is barely possible that in two years we will be able to get the same law passed in Tennessee—and we won't need Medical Defense then. Besides, it will be pretty expensive to employ good attorneys throughout the state when there may never be a suit brought. I think, too, it should receive the endorsement of the entire organization before being definitely adopted.

Dr. Sanford: We need something, and need it bad. It takes a hundred years to get anything done to change the Constitution in Tennessee. I don't see the advantage in putting it off. If we're going to do it, let's do it; not wait two or three years to get it before every County Society. I know of a case in our county of a poor country doctor who had a suit brought against him and it cost him \$500. He came to see me about it. Every doctor in the county stood by him and chipped in to help him pay that \$500. We need that law, and need it bad. It won't cost us much, and I say let's get it.

Dr. Richmond McKinney: This question is very close to me, also. I had a suit brought against me in Memphis for malpractice—and

the party who sued me was aided by a member of this Association. There was nothing to it, and the jury walked out and returned instantly with a verdict in my favor—but I had to pay my lawyer. The fact that she did not get judgment did not keep me from having to pay \$250 to defend the suit. City physicians, especially, have suits brought against them which have no foundation whatever, but rather than have the notoriety, they will compromise it to get it hushed up. Everyone knows that any first-class physician will pay any amount in reason rather than defend a malpractice suit—and they never fail to take advantage of it, because they know the doctors will buy them off. I know of several who have paid two or three hundred dollars in such cases rather than have the notoriety, and not one of the attempted suits was justifiable. The best thing about having the State Association defend these suits is the moral support of the entire membership. When it becomes known that the State Association with all its power is behind any member ready to defend him, there will not be nearly as many suits brought for malpractice. I am now paying \$25 a year for insurance against this very thing. I have not had a single suit against me since I took out this insurance, but I pay that \$25 every year just the same for the protection. And I would be willing to pay that much, or more, into the State Association for the same purpose.

I hope something will be done with this question, and done promptly. We can't get it too soon, and I hope the committee will so recommend.

Dr. Jere Crook: There is one feature of this question that seems to have been overlooked, and that is payment of damages, when judgment is rendered. You all remember that old saying of Pickney's: "Millions for defense, but not one cent for tribute." If we could also provide the payment of damages, we would be absolutely assured of the moral and financial support of every member of the Association in defending suits, as well as in payment of judgments rendered. This is another thing I think the committee might well take into consideration. To the best of my recollection, only three out of a great many malpractice suits I know of were suc-

cessful. The payment of damages is more of problem than the payment of costs to defend the suit. What good will it do to defend a man to the last ditch, and have no fund on hand for damages? If we provide for the payment of damages, it will come out of 1,500, and will be so little that no one of them will ever feel it and the man will not have to make any sacrifice to pay the damages, which otherwise he might have to do; so I think we should do this to make it strictly a Medical Defense Act. On the other hand, I do not believe in defending stupidity or carelessness. If a man is not stupid, and uses reasonable care, no jury on earth would give judgment against him.

Dr. H. Lockhardt: I am certainly in favor of the defense fund. We recently had a doctor in our county sued for malpractice and we all got together on our own hook and helped him out. I believe this House of Delegates is in favor of the defense fund, and I want to see it fixed some way for us to get the immediate benefit—and to get it during the ensuing year—not put it off a year.

Dr. Petty: It is not going to cost very much per member for defense, and there are very few here who do not pay out \$10 per year or more for individual insurance, and it occurs to me that they could spare that much to the Association for the same purpose, and this together with the new members it will bring in will be more than enough to offset the cost. I personally would much prefer having it done now, to putting it off, and if we can legally put it into effect now, I feel that we are perfectly free to assume the responsibility.

Dr. Broyles: I suggest that President Dulaney appoint this committee and let them work it out.

Secretary Bromberg: Do you want this committee to report back to this House of Delegates?

Dr. Broyles: Let them report at two o'clock this afternoon.

The question was then called for and it was unanimously voted that President Dulaney appoint a committee of three to work out the details of the Medical Defense question and submit their report to the House.

The President appointed Doctors S. R.

Miller, Jere Crook, and H. M. Tigert as the Medical Defense Committee.

Dr. Tigert: What time is this committee to report to the House?

He was informed that they were to report at two o'clock.

Dr. Savage: I move that we adjourn to the scientific meeting.

He was seconded, the motion was put, and carried.

AFTERNOON SESSION.

Wednesday, April 10.

The meeting was called to order by the President at 2:15 p.m.

Report of Dr. S. S. Crockett, State Representative to National Legislative Council, which was previously set for 2 o'clock, was called for.

Mr. Chairman and members of the House of Delegates: I desire hereby to publicly acknowledge the compliment paid me by the President when he designated me to represent this body at the National Legislative Conference called by the Council on Legislation and Public Health. I attended this conference as your representative at its meeting in Chicago, February 25.

Permit me to state that it would have been an inspiration to every member of this House of Delegates if he could have been present on this occasion.

There are some members of this Association—as I suppose there are in every other Association—who think that a Medical Organization is intended as a medium for the discussion of purely scientific matters as related to the practice of medicine, and that the responsibility of our organization ends with that.

These members take little interest in the activities of the organized profession in connection with public matters, especially of a legislative nature. These members, unfortunately, seem to wrap a robe of self-satisfaction around them, and refuse to see the importance of our relations to the public at large.

If these members could have heard the discussions of the representatives from the various states at the Chicago meeting, of the various efforts that are being made in the different states by the enemies of the Medical Profession to harass and embarrass them through legislative acts, they probably might take a different view of the matter.

The legislative problems that confront the profession throughout the United States seem to be very nearly identical in all of the states. The Medical Profession of the United States is striving to raise its own standard of qualifications for entrance into the profession; they are trying to

make better doctors out of the young men before they start.

In opposition to that idea a large horde of different influences charge us with being engaged in an effort to foist a trust—to limit the number of the profession, with the idea of our own advancement.

In their opposing efforts there are being introduced into the Legislatures of the various states where the profession are particularly active, bills that propose to require the Medical Profession to write their prescriptions in English and to state on the prescription the specific disease for which the medicine is prescribed.

In addition to that embarrassment which is being attempted, there is a great horde of alleged "Drugless Healers" who are making efforts in the different states to break into the medical profession through the back door. They allege they are not giving medicine, but that they treat by mechanical means and hence should be allowed to have a Board of their own and examine their own fellow practitioners and be allowed to issue license accordingly.

It has been thus far a very difficult matter to convince the Legislatures that the practice of medicine does not necessarily mean giving drugs and that a proper diagnosis is essential before any line of treatment can be devised and before a man can be a competent diagnostician he must be an educated physician. These "Drugless Healers" are very strenuous and very persistent, and masquerade under various names in different places. This situation confronts the Medical Profession in nearly all the states. Now, it developed at this meeting that the Legislative Committees of the different State Associations were absolutely powerless to combat the influences before the different Legislatures, unless they had the solid profession of the state at their backs, and even then little could be accomplished unless the profession at home exerted its influence upon the Legislators at the Capitol; that the Legislative Committee of the State Association might go before the Legislative members and oppose, or advocate anything they pleased, yet little was accomplished until the profession at home went to their Legislators and showed them just what the medical profession at home wanted; that was the only way the influence of the profession could be exerted at all.

The most interesting new idea presented at this Council meeting was a report from the Medical representative of the State Board of Medical Examiners of Wisconsin. Now, Wisconsin is always bringing up something new, and this time she has certainly offered something entirely new in the way of medical legislation.

The Board of Examiners of the State of Wisconsin through its legal representative had drawn up a bill, which is now pending before the state, providing for the regulation of all men engaged in practicing "The Art and Science of Healing."

It provides that every man who desires to engage in the Practice of the Art and Science of Healing shall, before he can apply for a license, have devoted four years of eight months each in some school recognized by the Board, and in addition to that, he shall have had a preliminary educational qualification equal to that required for entrance into the University of Wisconsin. If he secures his diploma from the school requiring this length of time, he then applies to the Board of Health License Examiners, before whom an examination must be passed. This bill specifies that the Examiners shall consist of "Nine members skilled by Education and Experience in the Art and Science of Treating the Afflicted."

Please note the subjects upon which these so-called "Practitioners of the Art and Science of Healing" shall be examined, and observe how different they are from the stereotyped subjects: Anatomy, Histology, Physiology, Pathology, Chemistry, General Diagnosis and Hygiene.

Now every "Drugless Healer" and every other kind of "Healer," including Medical Practitioners as well, has to stand examination on these subjects; then, if the applicant wishes to practice any special so-called school of medicine, he is examined by some member of that so-called school, designated by the License Board for that purpose, on the subjects peculiar to that school. That is, if he wishes to become a "Regular" physician he stands an examination before the representative of the License Board on Surgery, Obstetrics, and such other branches as the representative may designate; if an Osteopath, he is examined by an Osteopath, and so on.

This is really one of the most unique propositions that has ever been proposed, and I rather apprehend that the various states will be confronted with some legislation at no distant day, bearing upon the same line of thought.

I have a copy of the Wisconsin Bill, which I shall take pleasure in placing at the disposal of any gentleman who is interested in the matter.

Thanking you again, Mr. President, for designating me as your representative, I beg leave to state that I have nothing further of special nature to report.

Dr. Sanford: I move that Dr. Crockett's report be accepted, that he be thanked for making it.

He was seconded, the motion was put, and carried.

Dr. Tigert: The Chairman of the Nominating Committee, Dr. Dotson, has gone home, and some members have requested that someone else be appointed to serve in his stead, and this will have to be done now if at all, because the Nominating Committee meets shortly after this meeting is adjourned.

President Dulaney: I will leave that en-

tirely with the delegates, and they can choose whom they think best.

It was then moved and seconded that the President declare a two-minutes' recess, that the Nominating Committee might select a Chairman, and President Dulaney so ruled. At the conclusion of the recess, the Nominating Committee, through Dr. Tigert, declared Dr. J. A. LaRue Chairman of the committee.

Secretary Bromberg: At the request of Dr. LaRue, I have a resolution to read before the House of Delegates.

Permission was granted and the Secretary read the following:

"Whereas, announcement has been made through the press of the appointment of a successor to the present Secretary of the State Board of Medical Examiners, Dr. C. A. Abernathy, and whereas Dr. Abernathy has served the profession and the state faithfully and well, having been zealous and active in the discharge of the arduous duties that have devolved upon him, at all times striving for those things which tend to elevate the standards of medicine, therefore, be it resolved, that the Tennessee State Medical Society do commend Dr. Abernathy for the work he has done and express gratitude for his earnest and unselfish efforts to advance the cause of scientific methods in our State."

At the conclusion of the reading of this resolution it was moved and seconded that it be read before the scientific body, that it might receive the endorsement of the entire membership assembled at this meeting. The motion was put, and carried unanimously.

Dr. Cooke: Growing out of the report of the Representative of the National Council: It appears to me that it would not be a bad idea at all for this House of Delegates to officially inform our Senators that it favors the passage of the Owen Bill, and in diplomatic terms ask his consideration of it. I would like to move that it be done officially.

He was seconded, the motion was put, and carried unanimously.

Secretary Bromberg: I want to bring up a little matter mentioned yesterday in my report, relative to securing new members. There are a number of counties in this state that are not organized. There has been probably a half dozen who have spoken to me about this matter today. Of course, I appreciate the difficulties in organizing some of these counties.

As one doctor said this morning, a great many of them are not in reaching distance. I don't remember just who it was that said this, but I think some plan might be devised so that we can get the doctors in these unorganized counties into the State Association.

Dr. Miller: We have arranged this matter pretty well in East Tennessee. If a physician wants membership and his county is not organized, let him join the Society in an adjoining county—wherever it is most convenient for him to attend the meetings. Dr. W. B. St. John is here at this meeting. He is a member of the Washington County Society; Dr. Vance is a member of the Knox County Society, but it is sometimes more convenient for them to attend the meetings at Knoxville than in their own counties, and the County Secretaries have arranged it so that they may do this whenever they choose. I think this would be a very satisfactory plan anywhere in the state, if adopted. Just let it be understood that if a man wants to join his own County Society and then finds it more convenient to attend meetings in an adjoining county, let him do so. Or, if his county has no Society, let him join a Society in any of his adjoining counties.

Dr. Sanford: Some of these counties are very sparsely settled, and there might be some few men in these counties who would really like to attend the meetings of their County Society, but cannot do it, because they live so far away that it would take hours to make the trip. I would move that where they are situated this way, they be given the privilege of attending any Society most convenient for them to reach. If my county did not have a Society, where would I go? Transfer to Knox? I just want to put on the basis of allowing any member in good standing to attend any county meeting most convenient to him, or if his county has no Society, to allow him to join the Society in any county adjoining his own. But there is no county in the state that can't have a Society if they want it. Three men can make a medical society—and there is not a county in the state that hasn't as many as three doctors in it.

Dr. Wiley: Is there any by-law that prevents the members of any one County Society

from becoming a member of any other County Society?

Secretary Bromberg: The trouble about the situation is this: We have men in East Tennessee who are actually members of the Kentucky State Association.

Dr. Broyles: And some are members of the Virginia and North Carolina Associations. Didn't you all know we were spreading that way?

Dr. Wiley: We have a membership covering eight or nine states. We have a member in the State of Washington. That does not comply with the Constitution. Some of our men are taking membership in the Kentucky Society because of that Society having adopted Medical Defense. There is no County Society in close proximity to them, so they go to Kentucky because it is more convenient, and I move that we adopt Dr. Miller's suggestion of permitting men to join the County Society nearest to them.

Dr. Broyles: Men can belong to the nearest County Society—it's all in the By-Laws.

Dr. Miller: We have gone a little further than we intended. We have allowed men to join the County Society of which they were not residents, because it was more convenient for them than to go to their own County meetings, but I think we should have some definite understanding about this matter, for it is very important.

Dr. Sanford: The By-Laws are perfectly clear on this subject. If you have no organization in any one county, a man has a right to join the Society in the county nearest him, and if his county holds meetings where it is impossible for him to attend, by the consent of his local society, he can join another society. We can't keep a man in any one Society if he wants to join another where it is more convenient for him to get to, and where a man is refused this privilege, he can take it up with the Councilors, and it is his duty to do so.

There being no further discussion on this subject, the President called for any unfinished business, of which there was none. It was then moved that the meeting adjourn, which was seconded, and carried.

MORNING SESSION.**Thursday, April 10.**

The meeting was called to order at 8:40 a. m. by President Dulaney, who stated that the reading of the minutes of the previous day's meeting would be dispensed with for lack of time.

The report of the Treasurer was then called for.

Dr. Bilbro: The Auditing Committee has audited only the Secretary's books. I have mine ready, and would suggest that they take it now and go over it, and then report on both at the same time. I will read my report and then turn it over to them.

Dr. Bilbro then read as follows:

TREASURER'S REPORT—1912-1913.

Mr. President and Gentlemen:

Your Treasurer begs leave to make the following report:

1912—Dues from April 12, 1912, to January 1, 1913:

Balance on hand April 11, 1912.... \$1,144 84

County.	Amount.
Anderson	\$ 6 00
Bedford	32 00
Blount	2 00
Campbell	10 00
Carroll	28 00
Crockett	2 00
Giles	2 00
Hamblen	18 00
Hamilton	50 00
Haywood	2 00
Henderson	10 00
Henry	6 00
Jefferson	20 00
Knox	12 00
Lauderdale	48 00
Lincoln	48 00
Macon	16 00
Madison	4 00
Marshall	40 00
Maury	4 00
Monroe	6 00
Morgan	10 00
Obion	40 00
Putnam	2 00
Roane	4 00
Robertson	24 00
Shelby	32 00
Sumner	4 00
Tipton	12 00
Unicoi	14 00
Weakley	28 00
Williamson	24 00

Total\$1,704 84

1913—Dues received from January 1, 1913, to April 9, 1913.

Total, 1912	\$1,704 84
County.	Amount.
Anderson	\$ 16 00
Bedford	38 00

Campbell	28 00
Carroll	38 00
Cumberland	10 00
Davidson	244 00
Dickson	8 00
Dyer	72 00
Gibson	50 00
Giles	54 00
Greene	60 00
Grundy	8 00
Hamblen	18 00
Hamilton	162 00
Hardeman	26 00
Haywood	30 00
Henderson	48 00
Henry	22 00
Hickman	10 00
Jackson	26 00
Jefferson	14 00
Knox	146 00
Lake	16 00
Lincoln	50 00
London	18 00
McNary	26 00
Macon	20 00
Madison	66 00
Marshall	36 00
Maury	68 00
Monroe	18 00
Montgomery	44 00
Morgan	8 00
Obion	56 00
Overton	16 00
Polk	18 00
Putnam	26 00
Rhea	22 00
Roane	26 00
Robertson	34 00
Rutherford	48 00
Scott	10 00
Sevier	14 00
Shelby	308 00
Smith	28 00
Sumner	32 00
Tipton	50 00
Warren	22 00
Washington	40 00
Weakley	18 00
White	28 00
Williamson	24 00
Wilson	24 00

Total\$4,046 84

Amount disbursed since last meeting—1912:

May 3, R. B. Robinson	\$ 50 00
June 4, Rich Printing Co.	224 62
June 24, Rich Printing Co.	234 71
June 24, J. L. Crook	50 00
August 9, Wm. Whitford	153 00
July 16, Rich Printing Co.	37 90
August 9, C. F. Publishing Co.	184 00
September 11, C. P. Publishing Co. ..	150 77
October 30, C. P. Publishing Co.	171 05
December 11, C. P. Publishing Co.	338 30
December 23, J. R. Livermore, exp. to meeting	19 40
December 23, A. F. Richards, exp. to meeting	8 93
December 23, Z. I. Shipley, exp. to meeting	7 92
December 23, W. G. Frierson, exp. to meeting	4 55
December 23, O. Dulaney, exp. to meeting	15 50
December 23, E. T. Haskins, exp. to	

meeting	15 25
December 23, C. P. Fox, exp. to meeting	25 60
January 4, C. P. Publishing Co.	167 25
January 14, Marshall & Bruce Co. ...	90 00
January 27, S. M. Miller, exp. to A. M. A. meeting	50 00
February 15, C. P. Publishing Co. ..	168 00
February 15, Boyd Robinson, copies of Vital Statistics Bill	5 00
March 11, Dr. S. S. Crockett, expenses to Chicago	33 27
March 11, C. P. Publishing Co.	173 40
February 6, Home Journal Printing Co., printing for Treasurer's office ..	4 35
April 8, postage for Treasurer's office ..	5 00
April 8, Treasurer's salary	100 00
Total	\$2,487 77

RECAPITULATION.

Total cash received	\$ 4,046 84
Total cash disbursed	2,487 07
Balance on hand April 10, 1913..	\$ 1,559 07

Report shows \$48, but only find receipts for \$44 from Rutherford.

L. A. YARBOROUGH, Chairman,
ROBERT CALDWELL,
Auditing Committee.

Secretary Bromberg: I would suggest that the Auditing Committee now retire and look over Dr. Bilbro's report, after which they can report to the meeting, and we can save that much time.

The President so ordered, and the Auditing Committee retired.

Report of the Committee on Medical Defense was then called for.

Dr. Miller: The Committee on Medical Defense has adopted the following:

To the House of Delegates:

We, your special committee appointed to investigate the question of Medical Defense by the Tennessee State Medical Association, have considered its various phases and beg to recommend the following:

First, that the Association undertake the defense of its members in good standing in all suits for malpractice.

Second, that the Association obligate itself only for the proper expense of defense and not for compromise or judgments obtained.

Third, that this arrangement begin with the fiscal year and calendar year 1914.

Fourth, that a special Defense Committee of three members of the Association be appointed at this meeting to work out the details, collect and pay out proper funds, employ proper attorneys, and that they be given the power to act until they shall report to the next House of Delegates in 1914.

Fifth, that an assessment of one dollar per

member be made for the Medical Defense fund and same be collected by the Secretary of each county society and delivered to the Treasurer of the Medical Defense Committee, who shall give proper bond for same on or before January 1, 1914.

Sixth, that the Secretary-Editor and the several Councilors be instructed to properly put this matter before each county society at an early date and keep it before them until January 1, 1914.

Seventh, that this report be adopted, after ratification by two-thirds of the county societies.

S. R. MILLER, M. D.

H. M. TIGERT, M. D.

JERE L. CROOK, M. D.

Dr. Sanford: I move that we adopt the report as read, have the Secretary spread it on the minutes and write it to all of the County Secretaries.

Dr. Miller: If this is adopted it cannot be changed.

Dr. Savage: If I understand the resolution, it is to take effect January first, 1914, prior to the next annual meeting? If it is to take effect before the next annual meeting, it should take effect before January first. I still think it a better plan to refer the question to the County Secretaries and have them instruct their delegates to the next meeting how to vote on it. But if it pleases the House to have it take effect before the next annual meeting by no means defer it until January first—somebody might get into trouble before then. I am sure, however, that we should consider this very carefully before taking any final action on it.

Dr. Pettey: I see no reason why the matter should not be referred to the County Societies and be approved by them before going into effect. After all, it is an official action. The County Societies make the law. We can not pass it now and refer it to the County Societies for confirmation. If we refer it to them and they approve it, we cannot take any action on it until the next annual meeting. Whereas if the majority here approve it—two-thirds, I believe—it will then become a law.

Dr. Sanford: It will take two years to pass the law Dr. Pettey is talking about. That's what is the matter in Tennessee now. We are sent here to represent the County

Societies, with full authority to do what we think best for the good of the Association, and if they don't take the responsibility of our official action, what's the use of sending us here? We propose to adopt Medical Defense, and if there is any County Society in the state that does not want it, what are they going to do, withdraw from the Association? There is no use in going back to obsolete systems. I will pledge my County Society, and will pay my part of the dues, if they don't want Medical Defense. Personally, I have never had a malpractice suit, but our County Society has for the past eight or nine years employed an attorney, though we have never paid him a cent, and on three different occasions people have gone to that man in an endeavor to sue some member of our County Society and he would tell them that he was employed by us—and that was enough. They dropped them then and there. We haven't had a malpractice suit in our county since 1902. The only suit we ever had was brought on by a weak-kneed doctor who didn't know what he was doing. We sat down on him so hard he didn't know where he was, but we stood by him—though it cost us \$500—and right then we got busy and employed the best lawyer in the county. We have never paid him a cent, but he has been our attorney ever since. Let's get busy and get this thing—and get it right now. There's no use in waiting a year or two.

Dr. O. J. Porter: May I ask if it is constitutional for us to impose this upon the County Societies, when they will have to stand the expense of it? I think Dr. Savage's point was very well taken, and I move that it be referred to the County Societies for confirmation before any final action is taken. Where will the money come from to provide Medical Defense for the year just ending, if we adopt it right now? Will the State Secretary have to go back to the County Societies to get the money to pay for it? However desirable it may be to put the matter through right now, as suggested by Dr. Sanford, is it constitutional for the House of Delegates to impose it upon the membership without their approval?

Dr. S. R. Miller: The fiscal year of the Association is from now on to be the same as

the calendar year. The Constitution says: "Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each County Society, to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Association and profession."

I do not consider this as an appropriation of funds, because we have nearly a year to go, if the recommendations of the committee are carried out. But if we have a balance of several thousand dollars on hand, all right. I have had four or five men to agree to get a guarantee fund of \$10 each for this purpose. Some of us pay \$10 to \$25 insurance fees right now. If we make this effective January first, 1914, it will be even with the fiscal year.

Some have suggested that the County Societies be given the option of adopting or refusing Medical Defense, but if we make it optional with each individual and let someone lay it before the County Societies and he delivers his County Society before January first, he is efficient; if not, he is not, but at the beginning of the year 1914 we will know where we are and whether or not to make it compulsory. Dr. Sanford speaks of his County Society as willing to stand behind anything their delegate might do or say, but I'll tell you that East Tennessee men are hard men to drive. They can be led most anywhere, but they are a hard crowd to drive, and I believe that if we can make this optional with the County Societies it will be very much better—I know it will for our Society.

Dr. Sanford: We do not propose to drive anybody. We are leaving old methods behind every day and adopting new things—trying to make ourselves keep up with the times—why put this off? The longer we put it off, the longer it will be put off. This is the twentieth century—not 1700—and we are using modern methods in everything else. I will personally stand responsible for my County Society. According to the Constitution we have absolute authority to do what we think best for the Association.

Dr. Dotson: Doesn't that make it optional on each individual? According to Dr. Miller's speech just now, he was talking about whether or not we should make it optional with the County Societies. We have gone all these years without medical protection, and it seems to me that we can go on until January first, 1914, without it—and this will give us ample time to see how the members at large feel about it.

Dr. Tigert: This is a very radical step and involves the expenditure of considerable money. There will be a few men in this body who will not endorse this—as there are in every large body who will not endorse anything. The best way is to start slowly and cover the ground thoroughly. It will give us plenty of time to wait six or eight months and get the thing in proper shape. I believe it best to begin it on January first, 1914, as recommended by the committee. I am not in favor of a few men putting a burden like this on the membership without their knowledge, because I think the men who contribute their money to make the Association the success it is, should certainly have the right to say whether or not they want it. The best plan is to refer it to the Secretaries of the County Societies, and that's the thing we should do.

Dr. Savage: If the Constitution is the only consideration necessary, we could legally put it into effect before the next annual meeting. When Congress passes an amendment to our Constitution it has to be ratified by a two-thirds vote, then it becomes a law—as was done with the Income Tax. We have an amendment to our own Constitution that has just been ratified. Our Constitution can be amended only by introducing the amendment at one meeting and carrying it over to the next meeting for final action. We should have this introduced the same way, and the County Societies could then instruct their delegates who attend the next annual meeting how to vote on it; then if they approve it, it becomes a law. It will be a dead letter and considerable trouble otherwise. I do not believe anybody will use his right to assume an office he has not been delegated to assume—and I know no one here has been delegated to pass upon this question. Let's give it a

little time. Even if it takes a year, it will be the best way.

Dr. Cooke: Dr. Savage cites us to the Constitution. There is nothing in the Constitution to cover this particular question. The House of Delegates has the right to dispose of this question as it sees fit. As I see it, we have a perfect right to adopt the resolutions of this committee, we are not a congressional body. We have the right to adopt such measures as we think are best for the Association, and I feel sure we have the right to adopt these resolutions as our recommendations and let them be referred to the County Societies to pass on, but if we are going to do it at all, let's get it started now.

Secretary Bromberg: I would suggest that we take these resolutions up section by section.

This was concurred in and Dr. Bromberg read Section 1.

On motion duly seconded, this was unanimously adopted.

Dr. Bromberg then read Section 2.

On motion duly seconded, this also was unanimously adopted.

Dr. Bromberg then read Section 3, and stated that no member would have medical defense until 1914, and then only providing he had paid his \$1.

Dr. Savage: I move that Section 3 be amended to take effect just as soon as two-thirds of the County Societies have given their endorsement.

Dr. Miller: I move that we amend that amendment by making it January first, 1914, and after two-thirds of the County Societies have given their endorsement, because it will take that much time to get it working, anyway.

Dr. Savage: I accept the amendment to the amendment.

Dr. Pettey: I believe that instead of having two-thirds of the County Societies give their endorsement, we should take a vote and secure the endorsement of two-thirds of the entire membership. For instance, we have a number of members of the State Association who are not members of any county society. If we leave it to the vote of the entire membership, these members will have the same

right to vote on it that the members of County Societies have.

President Dulaney: We could not do that at all. It would be going against the By-laws. Dr. Bromberg, read Section 3 again.

Dr. Bromberg re-read Section 3.

Dr. McCabe: We seem to be adopting part of these recommendations and sending the balance back to the County Societies for ratification. When I look over this body, they all look to me like representative men. They are sent here by their respective Societies to act, and I believe that if it goes back to the County Societies for ratification, they will simply do what we want them to do, and will then go ahead and engage their lawyer. Then suppose, for instance, that this lawyer learns that it is to be referred to all the County Societies for ratification before being adopted by the State Association, and he finds he is going to lose his retainer fee. If we employ a lawyer in every county of the state this will cause a great deficit.

Dr. Cooke: We won't pay them unless they do something.

Dr. Sanford: We haven't paid our lawyer anything, and he has done nothing—there has been nothing for him to do. Engage him with this understanding.

Dr. Tigert: It seems to me that we should adopt this resolution as it stands. Let's tack an amendment on the whole thing saying that it is to take effect after two-thirds of the County Societies have endorsed it. I move that the two amendments suggested be put on and that we vote on the entire recommendation as a whole.

Dr. McCabe: I move that we table the amendment and the amendment to the amendment.

Dr. Miller: We want to get something tangible, and then they will either adopt it or refuse to adopt it.

Dr. McCabe: Well, let's take a vote on tabling the motion made by Dr. Savage.

The motion was put, and carried unanimously.

Dr. Sanford: I move that we now vote on the whole bill.

Dr. Miller: If you do this, you will be driving the East Tennessee members into it—and they will not be driven. I know them.

If we do any changing, let's change it according to Dr. Savage's amendment and then adopt it all and refer it to them.

Dr. Cooke: I propose an amendment in the form of a separate clause. There are now six sections. Let's amend the report by adding another section, making seven sections, saying that the scheme becomes operative when it is ratified.

He was seconded, the motion was put, and carried unanimously.

Secretary Bromberg then read Section 4.

Dr. Tigert: The third section has never been adopted.

Dr. Petty: I move that we adopt Section 3 and Section 7 as one section.

The Secretary was asked to re-read Section 3, which he did.

Dr. Lockhart: What's the use of appointing a committee to make their recommendations, until two-thirds of the County Societies say whether or not they want it? What is the committee to do, with no funds?

President Dulaney: I can explain that very thoroughly. The Annual Meetings are held in April; the dues from now on will be collected in January, and anyone paying dues at that time will be entitled to Medical Defense, provided they pay the extra assessment.

The President then put the question regarding the adoption of Section 3, which carried unanimously.

Secretary Bromberg then read Section 5.

Dr. V. L. Lewis: It seems to me that when the County Secretaries make this collection of \$1 it should not be transferred to the Secretary or Treasurer of the special committee, but instead of that let the County Secretary transfer that \$1 with his dues, and let the State Secretary handle that also. It would not mean very much more trouble for him.

Dr. Tigert: The committee made the recommendation in Section 5 purposely so that the Medical Defense fund would be in charge of one man whose sole duty, so far as the Society is concerned, would be to look after it. We certainly ought to be able to find one man in the Association who can do this.

Dr. Porter: It should not be provided that we merely collect \$1. It seems to me that it

would be very desirable to collect the whole thing at one time—that this should be made a part of the state dues.

Dr. Tigert: This only applies to men in good standing.

The question was then called for on Section 5, which being put, carried unanimously.

Section 6 was then read by Secretary Bromberg.

It was moved, seconded and unanimously voted that Section 6 be adopted.

Dr. McCabe: In this report it says "organize." It does not say that they shall have a Secretary. Now wouldn't it be well to put under that, that the committee shall organize by electing Chairman and Secretary. Also, when shall they organize? There is no suggestion as to the date of organization.

Dr. Miller: We leave it to the committee to provide a Treasurer, under bond. We did not say how he should be appointed.

Dr. Sanford: For the benefit of our friends in East Tennessee—I am from West Tennessee—I want to say that I have never had a damage suit. Before I read medicine, I read law, and I have a paid attorney to look after my affairs. We do not expect to force any men to join in this if they do not want to join. Don't take it up at home with the idea that we are trying to force them into it. The Tennessee State Medical Association has made a step forward—and that's the way every member in the Association should look at it.

Dr. Cooke: I move the adoption of the entire report.

He was seconded, the motion was put, and carried.

Secretary Bromberg: Section 4 has been adopted, but it does not provide who shall appoint these members. It merely provides that three members of the Association shall be appointed. It does not say whether the President shall appoint them, or who.

President Dulaney: I would rather not take the responsibility of appointing this committee. Can't the House of Delegates appoint them?

Dr. Pettey: They can be elected by the House of Delegates, upon the recommendation of the Nominating Committee.

Dr. Tigert: In order to fix it for all time, put in the words "by the House of Dele-

gates." Otherwise there will always be a question as to where this committee is to come from.

Secretary Bromberg: You can't do that now. The entire article has been adopted, and the matter is now closed.

Dr. Tigert: Well, let's go back to it, notwithstanding the fact that it has been adopted. How can I get it open?

Secretary Bromberg: You can move for a re-consideration of Section 4 if you want to.

Dr. Tigert: All right then, I move for a re-consideration of Section 4.

Dr. Eve: It seems to me that is entirely unnecessary. The very fact that the matter has been adopted by the House of Delegates puts it within the power of the body to provide for anything left undone. In other words, the official body will take cognizance of it, and re-considering the matter seems to me entirely unnecessary.

Dr. Savage: The motion made by Dr. Tigert should be adopted, for two reasons: First, because an act to accomplish it should be made a chapter of the By-laws; second, that amendment should really be on Section 4.

The question was called for, which being put, carried unanimously.

Dr. Tigert: I move that under Section 4, after the words "a special Defense Committee be appointed," we insert the words "by the House of Delegates."

Dr. Bilbro: How often?

Dr. Tigert: Annually. Be appointed by the House of Delegates annually.

Dr. Carter: I do not think we should say annually. It would be better to have it one, two and three years. In this way, all members of the committee will not be new men, and can do more effective work, and I move that these words be inserted also.

Dr. Miller: I think it was the intention of this committee, where it says this "committee shall be appointed to formulate By-laws," to say that the Nominating Committee should appoint one man for one year, one for two years and one for three years, just as the Trustees are, that will be the best way, and I move that we adopt that plan in lieu to Dr. Tigert's amendment; also, that they report to this body one year hence. That will pro-

vide men to carry on the work until new members are appointed.

Dr. McCabe: If you amend Dr. Tigert's motion, that stands until repealed. If the amendment is adopted it becomes a law and remains a law until repealed.

Dr. Miller: It remains a law until they report in 1914. One committee will be appointed by the President and after that they will be elected by the House of Delegates.

Dr. Tigert: Why appoint two committees? Let the House of Delegates elect this committee at this time. It cannot act anyway until two-thirds of the County Societies adopt the recommendations, and if they do, the report of the committee will show their plans. Just adopt that little amendment and put it back to where we had it. We have all voted to reconsider it. No provision has been made for a permanent committee. How is anybody to know where this committee is to come from, and how? I want to know.

Secretary Bromberg: Section 1 of Chapter 6 of the By-laws says: "The President shall preside at all meetings of the Association and of the House of Delegates and shall appoint all committees not otherwise provided for."

Since it has been moved that this be reconsidered, there is nothing now before the House, and I move that the committee appointed yesterday be retained and given one year in which to draw up plans and work out the details, present them to the County Societies and bring a written, complete report to this meeting next year.

President Dulaney: A motion has been made to reconsider the original motion, and that is now before the House.

Dr. Miller: I move that the original motion be adopted just as it is.

He was seconded, the motion was put, and carried.

Dr. Bilbro: I move that the recommendations of the Committee on Medical Defense be made a part of By-laws, and put there section by section as read here.

Dr. Cooke: We cannot amend our By-laws except by introducing a resolution and letting it lie over one day. As it stands, it is a resolution, and a By-law on the face of it. Next year, if we want to, it can be introduced

on one day, lie over until the next and then made a part of the By-laws.

Dr. Dotson: What was the last amendment?

Secretary Bromberg: To re-adopt the recommendations of the committee as submitted. Motion duly put, and carried.

Dr. Miller: I call for the next order of business. The first thing after the House of Delegates is called to order for the last session is the election of officers.

President Dulaney: Before doing this permit me to re-appoint the same committee.

Dr. Haskins: The Auditing Committee is ready to report if you are ready to hear them.

Permission was granted by the President and Dr. Haskins reported for the committee as follows:

After a most careful and painstaking examination of the books of the Secretary, we find that his report is entirely all right.

The Treasurer's report, however, has one little error, but Dr. Bilbro assures us this can be remedied as soon as he gets home to look up his receipts, and we recommend that his report be accepted.

It was moved, seconded and unanimously voted that the report of the Auditing Committee be accepted and that they be discharged.

The report of the Nominating Committee was then called for, Dr. LaRue, Chairman.

Dr. LaRue: We have just discovered that no man can be nominated for an office in the Association who is not in attendance at the meeting. We have made two nominations of which neither man is in attendance. We have no way of knowing positively just who is in attendance, and if we make another selection, it might result the same way.

It was suggested that the Secretary procure the Register of the meeting, for the purpose of reference in selecting candidates.

Dr. Savage: I do not care whether our law says so or not, no man should be elected to fill an office in this Association if he is not in attendance at the meeting at which he is elected.

Dr. Miller: Except Councilors. There is no reference to Councilors.

Dr. Cooke: Section 3 of Article 8 of the

Constitution says that "no person shall be elected to any office who is not in attendance at the Annual Session."

Dr. Miller: I withdraw.

President Dulaney: That matter is entirely with the House of Delegates. I would not want to assume the authority. My understanding of the law is that I only have the power to appoint a man to serve until the Committee of the House of Delegates selects his successor.

Dr. Bilbro: The House of Delegates has the right to nominate a man to fill any place.

Dr. Cooke: Let's have the report of the Nominating Committee.

President Dulaney called for the report, and Secretary Bromberg read the candidates, as follows:

For President: Drs. W. D. Haggard, of Nashville; L. M. Woodson, of Gallatin; A. F. Richards, of Sparta.

For Vice-Presidents: Drs. E. M. Holmes, of Murfreesboro, Middle Tennessee; Robert Mann, of Memphis, West Tennessee; H. P. Larimore, of Chattanooga, East Tennessee.

For Secretary: Dr. Perry Bromberg, of Nashville.

For Councilors: Second District, Dr. S. R. Miller, of Knoxville; Fourth District, Dr. Walter Dotson, of Gallatin; Sixth District, Dr. Joseph F. Gallagher, of Nashville; Eighth District, Dr. Herman Hawkins, of Jackson; Tenth District, Dr. B. N. Dunavant, of Memphis.

For Delegates to the American Medical Association: Dr. Jere L. Crook, of Jackson, West Tennessee; Alternate, Dr. John B. Steele, of Chattanooga.

For Trustee from East Tennessee, Dr. L. L. Sheddian, of Knoxville.

President Dulaney: We will first vote on the President. I will appoint Drs. Carter and Tigert as tellers of the Ballot.

Dr. Lee Smith: I am authorized by Dr. Richards to withdraw his nomination.

President Dulaney: We will vote with this understanding, but it is not necessary to withdraw his nomination. We must have three candidates.

The result of the ballot for President was: Haggard, 34; Woodson, 6; Richards, 0.

Dr. Sanford: I move that we make it

unanimous for Dr. W. D. Haggard for President.

He was seconded, the motion put, and carried.

Dr. McCabe: To facilitate the voting, let's vote by a two-thirds majority.

Dr. Carter: I move that the Secretary cast the entire ballot for the candidates named for Vice-Presidents.

He was seconded, the motion was put, carried unanimously, and the Secretary was so instructed by the President.

Dr. Dotson: I move that Dr. Bilbro cast the entire vote of the House of Delegates for Dr. Perry Bromberg, of Nashville, for Secretary-Editor for the ensuing year.

He was seconded, the question was put, carried, and Dr. Bilbro was so instructed by the President.

Dr. Bilbro: It is with great pleasure that I cast the entire vote of the House of Delegates for Dr. Bromberg for Secretary-Editor.

Secretary Bromberg: The men selected for Councilors in the Eighth and Tenth Districts are not present at this meeting, and someone else will have to be selected in their stead. We cannot constitutionally elect the men selected.

Dr. Bilbro: Is there no way to suspend the rules so we can elect these men? They are good men and will make good Councilors.

Dr. Sanford: We must elect men who are here.

Dr. Savage: I nominate Dr. J. T. Herron, of Jackson.

Dr. Tigert: I nominate Dr. A. B. Dancey, of Dickson, instead of Dr. Hawkins.

Dr. Caldwell: I nominate Dr. T. J. Coble to succeed myself.

Dr. Petty: I nominate Dr. B. V. Dixon, of Covington for Councilor of the Tenth District.

Dr. Dotson: I nominate Dr. J. Hugh Carter for Tenth District.

Dr. Carter: I would be glad to have my name withdrawn from the nominations. I have too much work to do to give the office the time it deserves, and don't want to accept it otherwise.

President Dulaney: Dr. Carter has withdrawn.

It was moved and seconded that the nominations be closed and that the Secretary cast the entire ballot for those nominated. The motion was put, and carried, and the President so ordered.

Dr. Cooke: Dr. Jere Crook has been re-nominated for Delegate to the American Medical Association. Are we to have two or three Delegates? We are entitled to only two. Dr. Crook's office expired last year. There are no Delegates to elect this year.

Dr. Cook's point was sustained by the chair.

Dr. Dotson: Dr. Bilbro has become such a fixture in the Treasurer's office that we are about to overlook him, but I think we had better instruct the Secretary to cast the entire ballot for Dr. Bilbro for Treasurer for the ensuing year.

Dr. Cooke: Dr. Bilbro holds his office for the ensuing year by virtue of his office as trustee. He doesn't have to be elected this year.

Dr. Miller: When the Nominating Committee selected their candidates, they did not understand that the men would have to be present. Someone else will have to be nominated, and I suggest Dr. C. J. Broyles, of Johnson City, as Trustee.

Dr. Tigert: I nominate Dr. E. T. Newell, of Chattanooga.

Dr. Carter: I second Dr. Newell's nomination.

A vote was then taken, which resulted in 18 votes for Dr. Broyles and 15 for Dr. Newell.

The President declared Dr. C. J. Broyles elected as Trustee for the ensuing three years.

Dr. Bilbro: I move that the next Annual Meeting be held in Memphis, Tenn.

Dr. Pettey: I am delinquent in my duties. A special resolution was passed by our Society extending an invitation to the Association to meet in Memphis next year. I regret that I was not on time in presenting it.

It was moved, seconded and unanimously voted that the 1914 meeting of the Association be held in Memphis.

Dr. Pettey: I would like to suggest that the report of the Medical Defense Committee be read before the general session, as a matter of information and courtesy.

Dr. Cooke: I want to ask if there isn't an

amendment to the Constitution hanging fire, with reference to changing the time of the Annual Meeting?

He was informed that the time of meeting had been changed to the first Tuesday in April.

Dr. Brandau: I am ready to submit a report of the Committee on Memoirs.

He then read the following:

M. F. Jearold, M.D.—Died January 5, 1913, at Jearoldstown, Greene County. Age, 92. He had been a practitioner at Jearoldstown for many years. During the war he served as surgeon in the North Carolina mounted infantry, and represented Greene County in the Legislature at one time.

W. A. Atchison, M.D.—Age, 80, at Nashville. Details reported in the Journal.

John Thomas Faucett, M.D.—Died at the age of 59 years, at Trenton, Tenn., February 2, 1913.

He was a graduate from Vanderbilt University, class of '81, and practiced his chosen profession until death—for twenty-five years at Trenton.

He was a member of his County, State and National Associations, also a member and ex-president of the Tri-State Medical Society of Mississippi, Arkansas and Tennessee.

John P. Blankenship, M.D.—Died at the age of 60, at Maryville, Blount County, Tennessee. He was a veteran of the Civil War, an ex-president of the East Tennessee Medical Association, and at the time of his death was President of the Blount County Medical Society and one of the most prominent physicians of that part of the state.

John Clear, M.D.—Died at the Lincoln Hospital, Knoxville, after a week's illness from paralysis. He was 58 years old; was graduated from the Kentucky School of Medicine, class of 1885. He was a charter member of the Anderson County Medical Society, which was organized in 1903, and joined our State Association the same year. At the time of his death he was Secretary of the Board of U. S. Pension Examiners, and Secretary of the Anderson County Medical Society. He was a man of many good traits of character and will be greatly missed by a host of friends, many of which are among the poor.

B. Cliff, M. D., died at Franklin, Tennessee, age 99.

L. B. Graddy, M. D., of Davidson County; details of whose life and death have been reported in the Journal.

J. W. McBride, M. D., of Covington, Tennessee, aged 46, died in a Memphis hospital about two weeks ago of gastric ulcer. He was President of the Tipton County Medical Society and a member of the State, Tri-State and American Medical Associations."

It was moved, seconded and voted unanimously that the report of the Committee on Memoirs be accepted.

Dr. Savage: Isn't it is the duty of the Councilors elected at this meeting to elect a Chairman and Secretary?

It was stated that Dr. E. T. Haskins was Temporary Chairman, and Dr. B. V. Dixon, Secretary.

President Dulaney: This election will be reported to the General Meeting, and they will then ratify it.

Dr. Savage: What has been done by this body is final, and is reported to the General Meeting only as a matter of information and courtesy.

Dr. Sanford: There is one thing we are about to overlook. We haven't yet thanked our Committee on Arrangements for the courtesies extended, and I move that this body extend them a hearty vote of thanks and give them a bouquet.

Dr. A. B. DeLoach: We have never been more beautifully entertained than at this session, and we would be quite remiss if we failed to express our thanks in the most sincere terms, and I will right here take occasion to say that when you come to Memphis next year you will find plenty of water—and other things. We have as pure water there as was ever welled—Dr. Savage never drank purer—and for the other members we will have most anything they can call for.

On motion the meeting then adjourned sine die.

TENNESSEE STATE MEDICAL ASSOCIATION.

Minutes of the Eightieth Annual Meeting held at Nashville, April 8, 9 and 10, 1913.

FIRST DAY—MORNING SESSION.

Tuesday, April 8, 1913.

The Association met in the Wilson Auditorium of the Y. M. C. A. and was called to order at 10 a.m., by Dr. R. E. Fort, Chairman of the Committee of Arrangements, who introduced the Rev. Carey E. Morgan, D.D., Pastor of Vine Street Christian Church.

Dr. Morgan delivered the following invocation:

INVOCATION.

Almighty God, our Father, we have come to ask Thy blessing to rest upon these physicians and upon the great cause to which they have committed themselves and for which they labor, and also upon their loved ones at home. We thank Thee for the fellowship that there is today. We are sure it must be precious to think and we know that it is worth while for them thus to meet and to discuss the great themes of their profession. We pray that the session of this convention may be rich and vital and full and giving benedictions to each of them. We rejoice when we remember the progress that has been made by this profession, and we like to remember how they have set an example for the men of other professions in the matter of the unselfish use of their discoveries, their inventions, and their progress in knowledge. We pray that Thy blessing may rest upon them when we remember how much they have done for the poor; how in the day and in the night they have responded to summons because they are ministers of mercy. God bless every one of them. Bless the hospitals; bless the nurses that work with these physicians, and grant, dear Lord, that the people may understand better than they do now, that they not only need prescriptions, but to follow the advice of physicians regarding life and sanitary conditions. We pray the time may come when there will be such an arousing of the social conscience that men will no longer be fighting the battle of disease, but when cities shall have such a complete organization as to gain victory over

diseases. Bless us, dear Lord. Fill our lives with calm in the name of the Son of man who was Himself a great physician. Amen.

Dr. Fort then introduced Dr. John A. Witherspoon, of Nashville, who delivered an address of welcome on behalf of the Nashville Academy of Medicine and the Davidson County Medical Society.

ADDRESS OF WELCOME BY DR. WITHERSPOON.

He said: Mr. Chairman, Fellows of the Tennessee State Medical Association:

It has been the custom for many years for some man to bid you welcome to whatever city in which you may have met. The Nashville Academy of Medicine and Davidson County Medical Society have seen proper to confer that honor on myself on this occasion. I want to say to you, gentlemen, that it would be a trite saying for me to bid you welcome to the central capital city of your state, and yet after all, we are so proud to have the grand profession of the State of Tennessee to meet with us every other year, and it gives us so much pleasure to bid you welcome, that it would be a hardship were that old custom done away with. If you had no other object in meeting than to renew social acquaintances, to give the right hand of fellowship after a year's hard laborious work, there would be some excuse for this meeting, but when you add to that the exchange of ideas and experiences; when you add to that the enlightenment that each receives by this exchange of ideas, there is another reason and a large one why we should meet together. But when we take the whole condition into consideration and find that we are but a unit of the great National body, and that each individual is the unit of this body, or his County Society, and the great objects being fulfilled by that association daily, then we are proud not only to meet, but to say to the world that we no longer meet to discuss ways and means of curing disease, but that we are a great band of brothers cemented together by a common professional bond of sympathy in our desires to prevent rather than cure sickness. If we can but carry out the great tenets of our National body, if we can but carry out the common instincts of our nation, if we can

but carry out the great privileges of a great profession, then in my judgment, we will still be the greatest body for good that can possibly assemble anywhere in the world. (Applause).

Think of it, gentlemen; in a few short years the whole trend of medical thought has practically revolutionized itself. We have found that the causes of many infectious, of many epidemics have been elucidated, and their methods of gaining entrance into the human body and the methods of transmission from one to the other are so well known, that by common education we will soon do away with many of the devastating causes which have brought so much blight in our fair land. So, gentlemen, we welcome you not only socially, and as a band of scientific brothers who have long held the standard of being their brother's keeper, but we welcome you more as a band of men the like of which the world has never known who are as men and as a body curtailing their own livelihood day by day with absolute unselfishness in trying to prevent disease and in bringing about a higher and better citizenship. Therefore, fellows of the Tennessee State Medical Association, it is an honor to welcome you to this city, a city in which you can carry out the great principles for which you have met. We bid you a heartfelt welcome. (Applause).

Dr. Fort introduced Dr. S. T. Hardison, of Lewisburg, who responded to the address of welcome.

RESPONSE BY DR. HARDISON.

Mr. Chairman, and the Representative of the Nashville Academy of Medicine and Davidson County Medical Society:

Any man who is a member of the Tennessee State Medical Association should feel proud of his membership. I consider it a great honor to have the privilege of representing this body, if only in a feeble way, in responding to the address of welcome given by our illustrious friend and fellow worker, Dr. Witherspoon. When we think of what the Tennessee State Medical Association is, what it has done, and what it is doing, our hearts well up with pride to know that we have taken an active part in the proceedings. When we think of

this body of men who have come together for almost a century, and who have extended their arms of love and protection over every honest truth-seeker in the science of medicine from the day of its existence to the present time, and when we know that every human being who wants to study medicine and wants to deal honorably with his fellowmen is warmly welcomed within its folds, we are not astonished that this movement has swept on over the State of Tennessee like a mighty river, taking in every honest student and everyone who desires to know medicine within its folds. We cannot help but say right here that there never has been a place in true medicine for isms, pathies and sects. Any man or woman, who wants to be a medical student, will find a warm welcome among the foremost minds of the land within the pale of the regular profession. There never has been a time in regular medicine when it has not been open and above board, and if anything proves beneficial we want to make it known to the world and give humanity the benefit of it. There has been nothing in the way of a secret nostrum or the hiding of some mystic thought, but if a true member of the profession discovers anything that he thinks good, he gives it to the profession for the benefit of mankind. The honest medical student delves into nature to find out things that will benefit his race.

Dr. Witherspoon has extended to us a welcome which we believe is sincere. We know there are various means of extending a welcome. The good ladies kiss each other when they extend their welcome, and sometimes if we behave ourselves they will kiss some who are not ladies. (Laughter.) But we do not blame them for that. Sometimes we are afraid there may be a little of the Judas taint in the kisses, that these kisses are formal and not real, and the welcome is not heartfelt, that it is the kiss of custom. But I want to say that the welcome we have received here is sincere, warm and heartfelt, and we are going to see how we can enjoy it. Some of us live in the country and live in dry towns, and we want you to be careful not to give us anything stronger than we are able to bear. (Laughter).

We want to stay here and listen to expres-

sions of the truths you have been delving into in your laboratories and to listen to your personal experiences and store them in the tablets of our memories. We understand that this physical universe has two great forces, one of which is attraction and the other repulsion. We are going to be attracted by that which we believe to be the truth, and we do not believe we will have much of anything else. If we do have some error brought before us, or if you are not willing to tell us what it is, we will regard it with suspicion, and we are going to repel.

We thank you for the warm welcome you have given us, and we shall do our best to enjoy it and appreciate it while we are in Nashville. (Applause).

REPORT OF CHAIRMAN OF COMMITTEE OF ARRANGEMENTS.

Dr. R. E. Fort, Chairman of the Committee of Arrangements, announced that tonight (Tuesday) addresses of a semi-public character would be delivered, the meeting beginning at 8 p.m. At this meeting the President's address would also be delivered.

Tomorrow night (Wednesday) at 9 o'clock, there would be a smoker at the Tulane Hotel. The profession of Nashville would be the host, and an invitation was extended to every visiting doctor to attend the smoker.

Dr. Fort said that it now gave him great pleasure to turn over the meeting to the President, Dr. O. Dulaney, Dyersburg, who took charge of the proceedings.

Papers were then read as follows:

Dr. P. H. Faucett, Columbia, read a paper entitled, "Ocondro-Multilocular Cystoma of Lower Jaw," which was discussed by Drs. Crook, Brandau, and in closing by the author of the paper.

Dr. Robert Mann, Memphis, followed with a paper entitled, "Intracranial Hemorrhage." Discussed by Drs. Paul Eve, Thayer, and in closing by Dr. Mann.

Dr. W. M. McCabe, and Dr. Joseph Gallagher, Nashville, read a joint paper entitled, "Reports of Cases Treated with Brown's Modification of Hodgen's Splint." This paper was discussed by Drs. Duncan Eve, Jr., Crook, Mann, Cowden, Crisler, Fort, and the discussion closed by the authors.

On motion, the Association adjourned until 2 p.m.

FIRST DAY—AFTERNOON SESSION.

The Association reassembled at 2 p.m. and was called to order by Vice-President W. J. Matthews, Johnson City.

The first order was a Symposium on Cerebro-Spinal Meningitis.

Dr. W. P. McDavid, Dyersburg, read a paper entitled, "History of Dyer County Epidemic."

Dr. Thos. Weaver, Nashville, read a paper entitled, "Report of An Epidemic in An Institution."

Dr. Wm. Litterer, Nashville, read a paper entitled, "Bacteriology and Pathology."

Dr. E. A. Thayer, Mobile, Ala., read a paper on "Symptoms and Diagnosis."

Dr. Louis Leroy, Memphis, read a paper entitled, "Treatment."

The symposium was discussed by Drs. Griffin, Shoulders, McCabe, Moody, Hibbett, Roberts, West, and discussion closed by Drs. Weaver, Litterer, Thayer, and Leroy.

Dr. L. E. Burch, Nashville, read a paper entitled, "After-Treatment of Surgical Cases." This paper was discussed by Drs. Crisler, Witherspoon, and in closing by the essayist.

Dr. F. J. Runyon, Clarksville, read a paper on "Paroxysmal Tachycardia." Discussed by Drs. Witherspoon, St. John, Sheddan, and in closing by Dr. Runyon.

FIRST DAY—EVENING SESSION.

The Association met at 8 p.m., and was called to order by Vice-President Matthews.

The President, Dr. O. Dulaney, Dyersburg, delivered his address. He selected for his subject, "The Necessity for Full Organization of the Medical Profession."

Dr. Frank Allport, Chicago, contributed a paper on "School Hygiene," which was read by the Secretary in the absence of the author.

This paper was discussed by Dr. Savage.

On motion of Dr. Witherspoon, a vote of thanks was extended to Dr. Allport for his instructive paper.

Dr. Geo. W. Crile, of Cleveland, Ohio, delivered a special address entitled, "Shockless Operations, with Especial Reference to Abdominal and Exophthalmic Operations."

On motion of Dr. Crook, a vote of thanks was extended to Dr. Crile for his instructive, interesting and original contribution.

Dr. C. N. Cowden, Nashville, presented a paper, which was illustrated with stereopticon slides, entitled "Backward Displacements of the Uterus." This paper was discussed by Dr. Newell.

On motion, the Association adjourned until 9 a.m. Wednesday.

APRIL 9, 1913—SECOND DAY—MORNING SESSION.

The Association met at 9:20 a.m., and was called to order by Vice-President Matthews.

Dr. J. M. King, Nashville, read a paper entitled, "Notes on the Therapeutic Value of Some of the Physical Agents; As High Frequency Current," etc.

Discussed by Drs. Savage, Newell, and in closing by the essayist.

Dr. N. C. Leonard, Nashville, read a paper on "Orthodontia."

Discussed by Drs. Broyles, McKinney, Jelks, Reager, and in closing by Dr. Leonard.

Dr. Hilliard Wood, Nashville, read a paper on "Submucous Resection of the Nasal Septum."

Discussed by Drs. McKinney, Broyles, Hogshead, Wylie, Carter, Crofford, Moore, and in closing by the author of the paper.

Dr. W. D. Haggard, Nashville, read a paper entitled, "Three Cases of Prolonged General Suppurative Peritonitis Pointing to Umbilicus, Incision and Cure."

Discussed by Drs. Carter, Crook, Mann, Richards, Garner, and in closing by the author of the paper.

On motion, the Association adjourned until 2 p.m.

SECOND DAY—AFTERNOON SESSION.

The association reassembled at 2 p.m., and was called to order by Vice-President Matthews.

Dr. K. S. Howlett, Franklin, read a paper entitled, "Diabetes with Report of a Case."

Discussed by Drs. Hardison, Litterer, and in closing by the author of the paper.

Dr. W. F. Braasch, Rochester, Minn., delivered a special address on "Clinical Observations on Renal Lithiasis."

Discussed by Dr. Bromberg, and in closing by the essayist.

Dr. T. Hugh Carter, Memphis, read a paper on "Treatment of Endometritis and Salpingitis." (No discussion).

Dr. W. N. Lackey, Gallatin, read a paper on "Pediatric Practice in the Small Town and Country."

Discussed by Dr. Shoulders, and in closing by the essayist.

Dr. Richmond McKinney, Memphis, read a paper on "Tonsillectomy and Tonsil Hemorrhage."

Discussed by Drs. Price, Chance, Hogshead; Cullom, Savage, Newell, Rash, and in closing by the essayist.

The Secretary read a resolution, which was passed by the House of Delegates, regarding Dr. Abernathy. (See Minutes of House of Delegates.)

On motion of Dr. Price, seconded by several members, the resolution was adopted.

Dr. W. A. Bryan, Nashville, read a paper on "Treatment of Acute Intestinal Obstruction."

This paper was discussed by Drs. Miller, Burch, Witt, Leroy, Holtzelaw, Reagor, McCabe, McGannon, Sanford, Chance, Witherspoon, Barr, Brandau, Newell, Cowden, Lackey, and in closing by the author of the paper.

On motion, the Association adjourned until 9 a.m. Thursday.

APRIL 10, 1913—THIRD DAY—MORNING SESSION.

The Association met at 9 a.m., and was called to order by Vice-President Matthews.

Dr. R. W. Billington, Nashville, read a paper entitled, "Osteoplastic Operations for Pott's Disease," with exhibition of case.

Discussed by Dr. McPheeters Glasgow, and in closing by the essayist.

Dr. W. B. St. John, Bristol, read a paper entitled, "Herba Panacea."

Dr. Scott Farmer, Cookeville, read a paper entitled, "The Importance of Medical Lectures in Our Rural Schools."

This paper was discussed by Drs. Roberts, Richards, Hibbett, West, and in closing by the author.

The following motion was made by Dr. D. J. Roberts, of Nashville. I move that the Secretary of this Association be instructed to present copies of these two papers (of Drs. Farmer and Lackey) to the leading secular papers for their Sunday editions, and that these copies be sent to the daily papers of Nashville, Knoxville, Memphis and Chattanooga.

Motion was seconded and carried.

Dr. E. T. Newell, Chattanooga, read a paper entitled, "Inguinal Adenitis Treatment."

Discussed by Drs. Reisman, St. John, Livermore, and in closing by Dr. Newell.

The Secretary read the report of the Nominating Committee. (See report of House of Delegates).

At the conclusion of the reading of the report Dr. Bromberg was called upon. He was received with great applause and said: I think the magnificent attendance at this meeting is sufficient evidence of the awakened interest of the profession. I appreciate the great honor you have conferred on me by this selection, and I shall for the next year give the same service I hope I have given you satisfactorily for the past two years. I have felt my personal interests demanded that I should give up this position and have repeatedly begged to be relieved from this duty, but I realize that there is yet much to be done to make this the great and prosperous organization it should be. We have grown from a little more than one thousand since I took charge of the office to a membership up to and beyond fifteen hundred. Formerly we have had an attendance at these meetings ranging from 150 to 200 or more, but up to yesterday 350 registered as being in attendance. Now, with a membership of fifteen hundred, and an attendance of only three hundred and fifty, I do not feel the proportion is yet what it should be. It is fair to say that we should have fully one-half of the profession of our state in attendance on our annual meetings, and I believe it can be accomplished. (Applause).

I desire to thank you again for your honor, and I assure you that I shall endeavor to give you the best service I have for the coming year, and I trust the Association may continue to prosper as it has in the past. (Applause).

Dr. Richards moved that the report as read by the Secretary be adopted as a whole.

Motion seconded and carried.

The President appointed Drs. Hibbett and Richards to escort the President-elect to the platform.

Dr. Dulaney, in introducing his successor, said:

I am proud to say to you, Dr. Haggard, that we have reached a new era of progress. I stated in my address that the Tennessee State Medical Association has awakened to new ideas, and it is my pleasure to say to you that they have selected a man with an international reputation as the leader for this year, and I hope all of the members will give

you their hearty and earnest support in the year 1913-14. With your selection we have every assurance of the fact that the next meeting will be the most successful ever held by the Tennessee State Medical Association. So, gentlemen, I take great pleasure in presenting to you your next President, elected for 1913-14, Dr. W. D. Haggard, Nashville. (Applause).

Dr. Haggard was warmly received. He said:

Mr. President and Members of the Tennessee State Medical Association: It is indeed difficult for me to try and voice in my feeble way the very deep sense of gratification and appreciation which I feel for the signal honor which you have seen fit to bestow upon me. I am sure, no one could realize more the responsibilities of an office of this sort, and I can only say to you that if you are willing to trust me with the helping forces of this great Association, I will do my very utmost to merit the confidence which you have placed in me. If I could only be as well supported throughout the conduct of the meeting next year and have such sterling magnificent specimens of manhood to carry me through my term of office as escorted me to this platform, I will surely be successful. Moreover, it so happened that the Lilliputians who escorted me to the platform happened to be my longest and dearest friends. I hope I may have the same source of feeling for you that I have for them. I must say, however, that as a visitor to other state medical societies in the last two years the thought has been impressed upon me that the great State of Tennessee has a grand mission in medical work to perform, and as our very efficient and capable Secretary has told us, there is no reason why in the State of Tennessee we cannot have a medical society that is second to none. We have the magnificent tradition of a wonderful past. We are standing almost on sacred ground. Curiously enough, within one block are the homes of three of the Presidents of the American Medical Association, and, it seems to me, with the hallowed memories that come down to us from the past of the grand men who have preceded us, it should be a source of great inspiration to us and make us feel our duty and call us to the highest possible position which we can attain. Therefore, gentlemen, under these circumstances I shall simply ask you to accept from me my very great appreciation and my sincere promise to do all that within me lies for the medical society of the great State of Tennessee. (Applause).

The President: We will now hear from the Secretary.

The Secretary: I will say by way of introduction that the House of Delegates yesterday discussed the advisability of adopting and endorsing a plan for medical defense, and a committee was appointed, consisting of Drs. S. R. Miller, Knoxville; Jere L. Crook, Jackson, and H. M. Tigert, Nashville, to formulate rules or suggestions in order that the House of Delegates might act upon them.

The House of Delegates has accepted this report and approved it by unanimous vote, and it will go into operation as soon as the committee formulates definite plans and get it before the County Societies.

The President: As this report is final, it will not require any action by the general meeting. This is a wonderful step in advance and should be carried into operation by every County Medical Society in the state.

Dr. D. L. Flanary, Dyersburg, read a paper entitled, "Business Side of Medical Practice."

This paper was discussed by Drs. Farmer, Yarbrough, Sanford, Freeman, Sullivan, and Banks.

Dr. C. G. Bull, Chicago, read a paper entitled, "Protective Ferments and Some Practical Diagnostic Applications." (No discussion).

Dr. Geo. R. Livermore, Memphis, read a paper entitled, "Vesical Calculus, With Report of Cases."

Discussed by Drs. Burch, Carter, Miller, Sumpter, Bromberg, Medling, Newell, Sevier, and in closing by the author of the paper.

On motion of Dr. Fort, the Association adjourned until 2:30 p.m.

THIRD DAY—AFTERNOON SESSION.

The Association reassembled at 2:30 p.m., and was called to order by Vice-President Livermore.

Dr. E. E. Reisman, Chattanooga, read a paper entitled, "Some Surgical Disease of the Stomach; a Plea for Their Early Recognition."

Discussed by Dr. Witherspoon, and in closing by the essayist.

Dr. S. M. Miller, Knoxville, read a paper on "Earth Burial."

Discussed by Drs. Cooke, Roberts, Miller, and in closing by the essayist.

Dr. E. M. Sanders, Nashville, read a paper entitled, "Chronic Intestinal Stasis."

Discussed by Drs. Carter, Reisman, Sanford, Cooke, and in closing by the essayist.

As there was no further business, scientific or otherwise, to come before the meeting, on motion, the Association then adjourned, to meet in Memphis the first Tuesday in April, 1914.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, Jackson Building, Nashville, Tenn.

MAY, 1913

EDITORIALS**THE NASHVILLE MEETING.**

That the Tennessee State Medical Association has at last grown into worthy proportion in point of membership and attendance, was exemplified at the recent meeting held in Nashville, April 8, 9 and 10.

There was in actual attendance more than four hundred of the state's most capable and progressive physicians and the high order of papers presented, as well as the unusual discussion of them, was an eye-opener to those who had never before been made to realize the value of perfect organization.

The successful meeting just closed marks an epoch in the history of the Association, for it has established a standard not only in point of attendance, but in original matter presented which will be an incentive for future meetings. With a total membership now exceeding fifteen hundred, there must be a still larger proportion in attendance on future sessions, and we trust that it may soon grow until sections will become necessary for the accommodation of the scientific matter to be presented.

With few exceptions the essayists were present and their papers were presented in regular order to large and enthusiastic audiences, the especial disappointment was in the absence of Dr. Guiteras, of New York, and Drs. Abt and Allport, of Chicago, who were prevented from being with us only because railroad travel was regarded as dangerous on account of the floods. The latter's address was read, however, by the Secretary, and will be published in a subsequent issue of the Journal.

The social entertainment was well planned, and with the exception of the unusual and unexpected attendance, which crowded the

banquet hall, went off without a hitch and was enjoyed by all.

The business coming before the House of Delegates was despatched with rare facility for a group of doctors and was marked by the best of feeling on the part of all, and much business of vital importance to the Association and to the profession, was transacted. Especially to be mentioned was the change of our fiscal year, which was formerly from meeting to meeting, but now made to correspond with the calendar year. The time of meeting was changed to the first Tuesday in April, in order to accommodate the profession of West Tennessee and allow them to attend both the Mississippi and their own societies, which formerly conflicted. Another important matter considered and adopted was Medical Defense, the details of which will be worked out by a special committee, and it is to be hoped that the County Societies to whom this action will be referred for ratification, will approve and endorse the action of the House of Delegates.

That the Nashville meeting was a success from every viewpoint, cannot be denied, but let us not be content until the number in actual attendance is doubled.

MEDICAL DEFENSE.

That our State Association is rapidly falling in line with other progressive states is evidenced by the unanimous vote of the House of Delegates in adopting the following suggestions of the Committee on Medical Defense—subject, however, to the approval of two-thirds of the County Societies within the state.

To the House of Delegates:

We, your special committee appointed to investigate the question of Medical Defense by the Tennessee State Medical Association, have considered its various phases and beg to recommend the following:

First, that the Association undertake the defense of its members in good standing, in all suits of malpractice.

Second, that the Association obligate itself only for the proper expense of defense and not for compromise or judgments obtained.

Third, that this arrangement begin with the fiscal and calendar year 1914.

Fourth, that a special Defense Committee

of three members of the Association be appointed at this meeting to work out the details, collect and pay out proper funds, employ proper attorneys and that they be given power to act until they shall report to the next House of Delegates in 1914.

Fifth, that an assessment of one dollar per member be made for the Medical Defense fund and same be collected by the Secretary of each County Society and delivered to the Treasurer of the Medical Defense Committee, who shall give proper bond for same on or before January 1, 1914.

Sixth, that the Secretary-Editor and the several Councilors be instructed to properly put this matter before each County Society at an early date and keep it before them until January 1, 1914.

Seventh, that this report be adopted, after ratification by two-thirds of the county societies.

Committee: S. R. MILLER, M.D.,
H. M. TIGERT, M.D.,
JERE L. CROOK, M.D.

The full details of this plan are to be worked out by the committee. We trust they may meet with no impediments in developing into full fruition this plan of defense for our members. It is the duty of the State Association to defend its members against suits for malpractice brought, as a rule, by shyster lawyers for clients suing under paupers' oaths and usually intended to defraud the doctor out of an honest fee.

OUR PRESIDENT.

By unanimous vote the House of Delegates conferred an honor upon our newly elected President, Dr. W. D. Haggard, and in honoring him also honored themselves and the Association. Dr. Haggard, though still a young man, has demonstrated his peculiar fitness to head the profession in this state. He is a member of the Council on Education of the American Medical Association and Chairman of the Section on Surgery in this same body. To his efforts more than those of any other individual, belongs the success of the Southern Surgical and Gynecological Association, whose Secretary he has been for a number of years. He occupies the chair of Clinical and Abdominal Surgery in Vanderbilt Medical College; is an ex-president of the Nashville Academy of Medicine and a surgeon of national reputation.

Dr. Haggard will bring his full strength and influence to the advantage of the State Association, in which he has always demonstrated a keen interest.

EDITORIAL COMMENT.

The Association is indebted to Dr. Geo. W. Crile, of Cleveland, and Dr. Wm. F. Braasch, of Rochester, Minn., for their very valuable contributions to the scientific sessions. Their papers were enjoyed immensely by all, and everyone felt that to have heard either of these papers was full compensation for attending the meeting. Both papers have been promised the Journal and will be published in a later issue.

Dr. John A. Witherspoon, President-elect of the American Medical Association, made a stirring address at the smoker tendered the visiting members by the Nashville Academy of Medicine, on the value of organization, and it is to be regretted that every member of the State Society was not there to hear him.

News Notes and Comment

Dr. J. R. Bone, of Lebanon, Tenn., is now in New York doing post-graduate work at the Polyclinic.

Drs. T. J. Coble, of Shelbyville, and W. B. Dalton, of Lilydale, were in Nashville recently attending the Scottish Rite reunion.

The Middle Tennessee Medical Association will meet in Dickson, Tenn., May 15 and 16. The meeting promises to be a splendid one.

Dr. R. M. McCowan, of Knoxville, and Dr. A. B. Qualls, of Livingston, were recently in Nashville being initiated into the mysteries of the Scottish Rite.

The East Tennessee Medical Association will hold its semi-annual meeting at Lenoir City, May 15 and 16. The indications point to a splendid meeting in every way.

Dr. S. W. Woodyard, of Greeneville, Tenn.,

has been appointed by Governor Hooper as a member of the State Board of Medical Examiners to succeed Dr. E. E. Hunter.

Dr. Thos. M. Smoot was recently elected Mayor of Woodbury, Tenn. He is a graduate of the Medical Department of Vanderbilt University and a leading physician of Woodbury.

Mrs. Mary Simmons, of Nashville, has filed suit against St. Thomas Hospital, of Nashville, for \$5,000 damages, alleging that the slippery condition of the floor caused her to fall and break her leg.

Dr. R. D. Moore, of Brunswick, Tenn., was found dead in his bed at his office Monday, April 28. The circumstances surrounding his death were very suspicious. Dr. Moore was 35 years of age and unmarried.

The West Tennessee Medical and Surgical Association met in Jackson, Tenn., May 8 and 9. The program was an excellent one and the Association is to be congratulated upon their live Secretary, Dr. F. A. McSwain, of Paris.

The first meeting of the Graduate Nurses' Association of Tennessee was held at the Y. W. C. A. building, Nashville, Tenn., May 1 and 2, with a large attendance present from all parts of the state.

The organization promises much for the improvement of the profession of nursing.

Dr. Simon Flexner, of the Rockefeller Institute, New York, has placed with Dr. William Litterer, of Nashville, his Influenzal Meningitis Serum. Those having cases will confer a favor by reporting same to Dr. Litterer, who will be glad to make such microscopic examinations as may be needed and administer the serum free of cost.

The Middle Tennessee Medical Association will meet in Dickson on May 15 and 16.

At the public meeting to be held on the evening of the 15th, the program will consist of an address by the President, Dr. R. L. Jones, of Nashville, whose subject will be,

"Good Health As a Business Proposition."

Dr. W. N. Lackey, of Gallatin, will give an address on "A Plea for the Country Baby." Dr. Jno. A. Witherspoon, of Nashville, will take as his subject, "The Prevention of Disease and the American Medical Association."

W. B. Saunders Company, publishers of Philadelphia and London, have issued another edition (17th) of their handsome illustrated catalogue. In going through this edition we find it describes nine new books and ten new editions, not described in the previous issue. These new books are of great interest to the medical man, because they treat of subjects being daily discussed in medical circles. Any physician can get a copy of the Saunders' catalogue by dropping a line to these publishers. A copy should have a place on the desk of every physician, because it is most valuable as a reference work of modern medical literature. Send to Saunders today for a copy.

An English-speaking Conference on the Prevention of Infant Mortality will be held in Caxton Hall, Westminster, London, on Monday morning, Monday afternoon and Tuesday morning, August 4 and 5. The meetings will be held under the auspices of the (British) National Association for the Prevention of Infant Mortality and the Welfare of Infancy under the Patronage of the King and Queen, and will convene immediately preceding the opening of the International Medical Congress.

A tentative program has been issued by the committee which indicates that the papers will consist largely of medical opinion. The subjects treated will be:

"The Responsibility of Central and Local Authorities in Infant and Child Hygiene." "The Administrative Control of the Milk Supply." "The Necessity for Special Education in Infant Hygiene." "Medical Problems in Infant Nutrition." "Ante-natal Hygiene."

The President of the Conference will be the Hon. John Burus, M. P., President for the Local Government Board. The Chairman of the English Executive Committee is Sir Thos.

Barlow, and the Secretary, Miss J. Halford, 4 Travistock Square, London, W. C.

The American Committee, in charge of the part to be taken by the United States and Canada, will furnish information to those desiring to attend the conference.

Dr. Henry L. Coit, Chairman, 277 Mt. Prospect Avenue, Newark, N. J.

Dr. Phillip Van Ingen, Secretary, 125 East 71st Street, New York City.

The following preliminary program of the American Proctologic Society, which meets in Minneapolis, June 16 and 17, with headquarters at the Hotel Radisson, has just been issued.

(1) A Review of Proctologic Literature for 1912, Samuel T. Earle, Baltimore, Md.

(2) A Method of Operating on Fistula Without Cutting Muscular Tissue, Rollin H. Barnes, St. Louis, Mo.

(3) Report of a Case of Fecal Tumor Associated with Hirschsprung's Disease, Alois B. Graham, Indianapolis, Ind.

(4) A Further Consideration of Sir Charles Ball's Operation on Internal Hemorrhoids, Alfred J. Zobel, San Francisco, Cal.

(5) Deductions Based Upon an Analysis of Four Hundred Consecutive Rectal Cases, T. Chittenden Hill, Boston, Mass.

(6) Personal Reminiscences Upon the Subject of Proctology, Jos. M. Matthews, Louisville, Ky.

(7) Plastic Operations in Anal Stricture, Wm. M. Beach, Pittsburg, Pa.

(8) Injection Treatment of Hemorrhoids, Lewis H. Adler, Jr., Philadelphia, Pa.

(9) Anal Sphincters, Ralph W. Jackson, Fall River, Mass.

(10) Further Observations Upon the Surgical Anatomy and Pathology of the Large Bowel with Radiographic Illustrations, Granville S. Hanes, Louisville, Ky.

(11) The Ano-rectal Line: Its Clinical Significance, Collier F. Martin, Philadelphia, Pa.

(12) Intestinal Parasitism in the South: Modes of Distribution: A National Problem, John L. Jelks, Memphis, Tenn.

(13) Some Preliminary Observations on Gastro-Enteric Motility, Jerome M. Lynch, New York City, N. Y.

(14) Ano-rectal Fibrosis: A New Disease, J. Coles Brick, Philadelphia, Pa.

(15) Some New Diagnostic Means of Investigating Diseases of the Gastro-Intestinal Tract, Thos. Chas. Martin, Washington, D. C.

(16) Carcinoma of the Rectum, J. Rawson Pennington, Chicago, Ill.

(17) Venereal Affections of the Anus and Rectum, Edward A. Hamilton, Columbus, O.

(18) Further Observations on the Treatment of Pruritis Ani by Autogenous Vaccines, Dwight H. Murray, Syracuse, N. Y.

(19) Diarrhea: Its Causes and Treatment, George B. Evans, Dayton, Ohio.

(20) Ulcerations of the Rectum and their Treatment, Horace Heath, Denver, Colo.

DEATHS.

Dr. Hunter H. Ruble died at his home near Greeneville, April 21, of Angina Pectoris; he had been in declining health for about three years. Dr. Ruble was an alumnus of the Medical Department of the University of Tennessee, having graduated with the class of 1893. He was a member of the Green County Medical Society and served one year as President of same. He had many friends in his county and was respected by all, having commanded a large practice until failing health caused him to withdraw from active service. He was answering a call when he was stricken down by the attack which ended in his death. He was a Mason and was buried by his lodge.

MARRIAGES.

The marriage of Dr. Duncan Eve, Jr., to Miss Louise Stubblefield, both of Nashville, took place at Christ Church, April 15.

The marriage of Miss Chloe Malone, sister of Dr. Battle Malone, of Memphis, to Mr. R. L. Proudfit, occurred April 10 at the home of the bride.

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

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PERRY BROMBERG, M. D., Editor and Secretary

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SCHOOL HYGIENE, OR THE HEALTH AND PROGRESS OF THE SCHOOL CHILD.*

By Frank Allport, M. D.
Chicago, Ill.

I wish to express my thanks to the Tennessee State Medical Society for honoring me with a request to come to Nashville and address this body. It is an honor that I deeply appreciate and will never forget.

I was requested to read a paper on some eye or ear subject, but I felt that this society would be more interested in some general topic, and therefore requested the privilege of presenting to you a subject that is very near my heart, viz., "School Hygiene, or the Health and Progress of the School Child."

This is a topic of vast importance, and one which should enlist the interest and sympathy of every medical man in the State of Tennessee. You will, of course, understand that in a brief paper, such as I am presenting today, it is quite impossible to do more than to briefly sketch this subject to you, and to merely touch upon its almost endless phases, stopping to dwell here and there for a few moments upon some of its most salient features.

The question in a nutshell is this, are we going to give our children a "square deal" in our public schools? Are we going to invite or compel them to attend school and then fail to deliver to them what the citizens of this country pay for and have a right to ex-

pect? Are we going to diminish crime and poverty by educating the children under the best possible auspices? Are we going to materially lessen epidemics, sickness and bodily defects by the universal standardization and adoption of a proper search for diseases and defects in our public schools? Are we going to strengthen our nation intellectually, physically and morally by improving and increasing our educational facilities and possibilities through the avenue of placing the children of our country in a better physical condition? These are questions for us as citizens and doctors to decide, and these questions embody the text upon which I wish to talk to you today.

Let us start with the school houses of the United States, and endeavor to frankly and truthfully view the situation as it really is. We have some beautiful school buildings in this country, but we also have some buildings where, as Governor Ferris of Michigan recently said in his inaugural address, it would be unfit and unsanitary to stable horses and cows. We have some school houses without windows, where all the light and ventilation comes from the door. We have some school buildings that apparently do not shock the sensibilities of the health and educational authorities, nor those of parents and other citizens, where children are being blinded (or nearly so) by insufficient and improper illumination, bad text-books, and from contagion. In other schools, adenoids, enlarged tonsils, deafness, discharging ears and death are being encouraged by bad air and unsanitary conditions. In other schools, tuberculosis, pneumonia, measles and the other contagious

*Read before Tennessee State Medical Association, April, 1913.

diseases of childhood originate and prosper through unhealthy surroundings. Some schools are so cold and draughty that children are constantly chilled, while others are so hot and poorly ventilated that mental activity is almost impossible.

The best heating and ventilating systems should be in all schools, and the windows should be thrown open from time to time to thoroughly purify the atmosphere. The temperature of school rooms should be systematically observed, and it should be remembered that mental work can be best accomplished and good health secured and retained at a temperature of about 68 degrees.

Some schools encourage crooked backs by bad desks and chairs, while others spread contagion by unsanitary water-closets, roller-towels, and the common drinking-cup. In many schools children are penned in like cattle with totally insufficient means of escape, and could easily be burned to death as fire attacks the tinder-box, called by courtesy a school house. In some schools the physical well-being of the pupils seem to have been deplorably neglected, and but little (if any) attention is paid to the indoor and outdoor exercising, gymnasiums, play-grounds, bathing facilities, proper food, etc. And so I might go on almost indefinitely disclosing the truthful conditions of many school houses; but time presses and I will only add that bad school buildings should be torn down and new ones built, and that school buildings should be erected in healthy, quiet locations, with ample surrounding spaces for air, light and play, and that they should be built by architects who know this special line of work, and that they should contain every modern and well-tried device that encourages health and easy intellectual and useful progress. These views should be especially emphasized, as in thirty-six of our forty-eight States school attendance is compulsory.

I wish to protest against the prevalent custom of almost invariably building our best buildings for high schools, and leaving the youngest children to occupy the poorest buildings. The best buildings should be given to the very young, for it is during the earliest period of school life that children's bodies

and characters are most susceptible to surrounding influences. I wish that all children might go to school in proper buildings, but if a choice must be made, by all means give the best to the youngest children.

It is indeed surprising that, notwithstanding the fact that the proper building and equipping of school houses is a public affair of vital importance to individuals and to the nation, Ohio is the only State that has seen fit to pass laws calculated to regulate such matters.

The child is the greatest asset of the State. We are educating and rearing a nation that shall be useful in times of peace and in times of war. Our men and women should be big and strong physically, intellectually and morally. It rests with each mature generation to mould and shape the coming generation. The most important place for this essential work is in the great melting pot of the nation—the public school. Here the children come together and mingle; here they secure, at least, temporary relief from homes of squalor, destitution and crime. Here we have the opportunity to shape, educate and direct their minds, bodies and souls. Let us not neglect the golden opportunities, these solemn privileges, but let us make of our public schools the means whereby we can produce the highest types of manhood and womanhood. I herewith desire to endorse the attitude taken by many of our Boards of Education and recently emphasized by Mayor Harrison of Chicago, that our schools should be the social centers of their neighborhood for those who desire to so utilize them. Meetings, social gatherings, entertainments, etc., should be encouraged to go to the public schools, and the people of the various neighborhoods should be made to understand that these buildings belong to them, and can be utilized for all proper and legitimate functions.

I have gathered together some figures and statistics on the subject of our public schools that I hope may serve to impress upon you the importance of our schools and the intimate relationship existing between them and the health and welfare of our nation.

In the first place, there are in this country 20,000,000 school children, or 20 per cent of

the entire population. Seventy-five per cent of these children are suffering from some partially or completely remediable defect, which is more or less interfering with their physical, mental and moral advancement.

500,000 have organic heart disease.

1,000,000 have spinal curvature, etc.

1,000,000 have tuberculosis.

1,000,000 have defective hearing.

5,000,000 have defective vision.

5,000,000 have malnutrition.

6,000,000 have operable tonsils and adenoids.

10,000,000 have defective teeth.

Seventy per cent of the deaths in the United States are due to contagious and epidemic diseases that could, in most instances, be controlled and suppressed by proper medical school inspection.

There are 260,000 schools in this country valued at \$850,000,000; they cost about \$500,000,000 a year to maintain. No other investment pays so well. More money spent for schools means better schools and teachers and scholars, and this means better citizens, less crime and more money.

Forty-four million dollars are invested in the public schools of New Jersey alone, costing \$13,000,000 a year to run. There are 500,000 pupils in the State, with a possible attendance of 71,000,000 days, and yet owing to absences, only 9,000,000 of these days were utilized. Seventy-five per cent of these absences was due to sickness, representing a loss to the State of about \$3,750,000. Unquestionably, proper medical school inspection would have largely obliterated such an intellectual, moral and financial loss to the State. In searching for a remedy for this and other ills connected with the health and learning capacity of children, Dr. Ayers points to the confusion existing in this country. Some States and cities have laws that are probably not carried out, while other States and cities have none. Scarcely any two laws concerning medical school inspection are the same. There should be a universal adoption and standardization of such matters in every State in the Union. Dr. Ayers has a bill before his State Legislature, and hopes to create the office of State Supervisor

of Medical Inspection of Schools. The entire cost of this organization will not exceed \$15,000 per annum. It will be this officer's duty to create and enforce uniform rules concerning the health and well-being of the children of the State, including the plan of medical school inspection. He will instruct and encourage all those who are assisting in carrying out this work throughout the State. This plan should be adopted in every State in the Union, and the benefits that would thereby be produced would be simply incredible.

About one school house burns down for every school day in the year. What an opportunity for better buildings!

We have about 500,000 teachers, seventy-eight per cent of whom are women. They are practically all underpaid, considering the high character of the work required, and considering that they are rearing the coming generation. Their pay averages \$40.00 per month, or less than the average day laborer. In some States teachers earn less than \$150 a year. They pay the highest average salaries in California (\$918.00), and the lowest in North Carolina (\$200.00).

There are about 300,000 blind people in the United States, costing about \$15,000,000 to support, and most of this blindness could have been prevented by proper medical school inspection and subsequent medical care. About seventy-five per cent of American children have some eye, ear, nose or throat disease or defect which is seriously interfering with their educational progress. Most of these children can be relieved by proper treatment. It costs in England about £23 per annum to educate a deaf child, while a normal child can be educated for £14 per annum. In New York City, with a school population of 650,000, thirty per cent of the children are two years behind their grades, and ninety per cent of this is due to abnormal eyes, ears, noses and throats. Dr. Cronin found in one New York school 150 defectives who were backward in their studies and incorrigible in their characters. One hundred and thirty-seven had bad tonsils and adenoids, and 13 had defective vision. After these conditions were removed, all of their characters and school standing rapidly improved. Forty

thousand Minnesota children are retarded one year in their studies by adenoids. This costs the State \$1,000,000, which could all be saved by 40,000 simple operations.

Ninety per cent of school children have decayed teeth and deformed mouths. Decayed teeth produce pain, diseased mouths, germ saturated food, poor mastication and digestion, intestinal toxemia and impaired nourishment and bodily resistance. Dr. Osler declares that bad teeth are a greater misfortune to the world than alcohol, and I believe this statement can be substantiated. In Vienna they have formed a society for the care of children's teeth, with buildings in all parts of the city. They preach the gospel of good teeth and clean mouths to children and their parents. The Forsythe Brothers have erected a \$1,500,000 building in Boston for the same purpose. Free dental infirmaries are at work all over this country; but I would recommend that dentists who work in such institutions receive a reasonable remuneration for their arduous labors, as free service is too much to ask of dentists, and it has been shown in many places that the work languishes where no compensation is forthcoming. Children should not only have their diseased mouths regenerated, but they should be taught how to take care of their teeth by personal demonstrations and leaflets distributed to them and to their parents, as is done in Denver and other places. One of the large packing houses of Chicago, realizing that good teeth are an important factor in the maintenance of physical equilibrium, and that bad teeth induce poor health, pain, absence from business, the use of liquor, etc., has lately established at the yards a dental infirmary, where their employes may be cared for at practically no expense. The company pays the bills, and consider it is saving money by so doing.

Dental infirmaries may be separate institutions, or they may be connected with other free dispensaries accessible to school children, either connected directly with the schools, or situated so as to accommodate an extensive neighborhood and a number of schools.

I have for years been interested in the examination of school childrens' eyes, ears,

noses and throats by school teachers, and for this purpose have devised a series of nine questions, the answers to which will disclose the existence of at least ninety per cent of serious diseases, or defects of these organs. Teachers are perfectly competent to make these tests and a child can be readily examined in five minutes. If a defect is found a "Card of Warning" is sent to the parent, urging action in the matter. A vast majority of children (over seventy-five per cent) suffer from such defects, that are more or less preventing satisfactory school progress. A child whose eyes prevent comfortable study, or whose deaf ears render easy communication with those around him impossible, becomes retarded in school, discouraged and careless, truant and idle, and ultimately very likely leaves school, forms habits of idleness and vice, and not infrequently joins the criminal classes and becomes an expense and a charge to the state, in reformatories or prisons. To permit such children to follow such a programme is neither economical, philanthropical nor wise. Such defects should be systematically discovered and relieved (especially as the expense is almost nothing), after which the dull students may become bright and the hardship of study transformed into a pleasure. Even in cities having medical school inspection, I believe it much better to have these eye, ear, nose and throat tests made by either the teachers or the school nurses. Any intelligent teacher can make them. The doctor to whom the child goes will diagnose and treat the disease or defect. A day in the early fall should be annually devoted to these tests, and by so doing, and by subdivision of the work so that each teacher makes the tests in her own room, an entire city can easily be examined in one day. Or, if this idea be deemed inadvisable, a few children can be kept after school during a certain week in each early fall, and at the expiration of the week all the children will have been examined.

If in the State of Tennessee you are not fully prepared to go into the matter of general medical school inspection, you can at least have these simple, cheap, and efficient tests made, for by so doing you will accom-

plish a vast amount of good at practically no expense and no trouble. No teacher should feel that these tests are an additional labor, for they are but little trouble, and in the end will repay the teacher a thousand fold in reducing her work, by changing stupid, exasperating children into bright and agreeable scholars, after their eye, ear, nose, or throat defects have been relieved.

Dr. Hoag, of California, now working with the Minnesota State Board of Health, at the suggestion of that best of Secretaries, Dr. H. M. Braeken, has devised a series of questions which enlarges upon my method. I proposed years ago that an annual systematic examination of school children's eyes, ears, noses and throats should be made by teachers. Dr. Hoag goes further, for he proposes by similar simple questions and observations made by the teachers, to include practically the entire body.

His questions are subdivided off into groups, such as "Eye," "Ear," "Skin," "Nervous System," "Teeth," "General Condition," etc. The teacher fills out the answer to all the questions, after which a very good idea of the child's health and conditions can be formed. If the child is defective or diseased, the parent is then urged to seek the advice of a reputable physician. Dr. Hoag has his headquarters at the Capitol Building in St. Paul, and holds himself in readiness to go wherever called to make health observations and to give instruction to school authorities, how they can best accomplish medical school inspection in the various towns. He is kept constantly busy, and is doing the best and most systematic work I know of in this country. He allows each town to select one of three methods of doing the work. They are as follows:

1. Organization with a Medical officer and nurse, or nurses.
2. Organization with school nurse only.
3. Organization by the employment of a simple non-medical health survey, on the part of the teacher only, such as I have just briefly described.

I sincerely wish that all other states would follow the example of Minnesota.

Professor Heck, of the University of Vir-

ginia, is doing field work similar to Dr. Hoag's.

The question of defectives and schools for defectives is one of the most interesting phases of the subject under discussion. About one and one-half per cent of the school population is defective mentally. Many children appear to be mentally defective, who become normal in appearance, when certain physical defects, such as adenoids, deafness, poor eyes, etc., are relieved; but about one and one-half of the school population remain mentally defective. What are we to do with them?

There are in all schools four classes of pupils, viz:

1. Those who keep up with their grades.
2. Those who do not keep up with their grades, but who eventually do, after certain physical diseases and defects are corrected.
3. Those who do not keep up with their grades on account of actual stupidity, laziness, viciousness, etc.
4. Those who do not keep up with their grades on account of mental defectiveness.

Children who do not keep up with their grades are called "repeaters." They stay in one grade or room, term after term and hardly advance any in their studies. There are about 3,000,000 such children in the United States, and it costs about \$100,000,000 to educate, or try to educate them. A very large majority of these 3,000,000 repeating children can be kept from repeating by relieving them of their physical diseases or defects. By taking advantage of this great economical and humanitarian measure, the repeaters would be practically reduced to those who do not progress, owing to real stupidity, laziness, etc., and to those who are actually defective mentally. Concerning the first, we shall have to get along as best we may, but concerning the mentally defective, I am sure they should be taken out of the general schools, and placed in schools especially prepared for their benefit. All repeating children are a detriment to everybody in the school room, and they should either be cured of repeating or else placed in separate schools. They frequently hold back an entire class, for the teacher either has to neglect the balance of the class for their benefit, or the progressive

scholars are taught at the expense of the lag-gard. Mentally defective children should therefore attend small schools, where under the influence of special teachers, environments and methods, they may be educated according to their mental qualifications. Epileptics may, if necessary, be taught in these same schools.

It is getting to be pretty well understood, that badly crippled and deformed children should receive special instruction in separate schools provided by the Boards of Education. Children only slightly deformed may be educated in the ordinary schools, but there are many children extraordinarily deformed, such as those who are armless, or legless, etc., who need special education, both from humanitarian motives, and to keep them from becoming charges upon the Commonwealth. They should be gratuitously transported both to and from school.

Blind and deaf children should have access to public schools of special character. Many such children are educated in State Institutions; and where their homes and parents are of a poor quality, such places are best for them. But where children have good homes and parents, they should be educated in their own cities, where they can receive the benefits of home surroundings.

Open air schools, especially for the benefit of sickly and tuberculous children, such as are in existence in Providence, Mont Clair, Chicago, New York, Philadelphia, etc., are doing a grand work, and are becoming more popular every year. There are over 200 of such schools in the United States at the present time. The school is usually a commodious tent, or it may be on the roof of a school building, or in rooms well supplied with many open windows. Children are frequently gratuitously transported to and from school, and are given free, or nearly free, hot and nourishing food from time to time. They are well wrapped up in warm clothing and are properly exercised at certain intervals, and are encouraged to take naps in the afternoon. These schools are doing an enormous amount of good. To reduce the subject of tuberculosis to the sordid level of figures and money, I will remind you that 7,000 children die annually in this country each year of tubercu-

losis. The average age of these children who die is 12 1-2 years, and inasmuch as the average age of children when they begin school is 6 years, these children have been receiving free education by the state for over six years before they die. It costs \$30.00 a year for the public school education for a child. These children have therefore, each cost the state for their education over \$180.00. When we consider that 7,000 children die each year of this disease in this country, it means that the Nation spends over \$1,000,000 each year of useless money for their education, it is evidently cheaper by far to keep children well than it is to allow them to remain sick or defective.

The question of vocational education in our public schools for children is one of great importance, and it is to be hoped that it will not be long before children all may be trained for some useful vocation in life in the public schools.

The subject of free, or almost free, lunches of a good nourishing character, is believed by many to be an economic measure, as children who are well nourished can make better school progress than those who are not.

Free, or almost free glasses, is considered in about the same light, as children who need glasses but cannot afford them are much handicapped in school. This need not be a great expense, as in Cleveland, where this work is being done quite thoroughly, they only give away a little over 300 pairs of glasses in a year, which when purchased at practically wholesale rates amounts to but very little. Twelve of our states distribute free text books, and in Massachusetts, immediately after this law was in execution the school attendance increased ten per cent. In Newark, N. J., they have recently established an "Infants Consultation Station," which is located in one of the school buildings. It is open from 11 to 12 o'clock, and is in charge of a doctor and a nurse. Here parents bring their infants, and are instructed how to bathe, dress, feed and care for their babies. Healthier babies will be produced by this process, who, when they arrive at school age, will be much better equipped to receive and profit by a public school education.

Some people imagine that while trachoma exists in India, Egypt, etc., there is little or

none of it in this country. Unfortunately, however, trachoma exists in lesser or greater degrees all over the country. Dr. John Green, Jr., found 223 cases in 21,930 school children in St. Louis. Dr. J. A. Stucky's wonderful journeys into the mountains of Kentucky disclosed a most pitiful trachomatous condition. Trachoma is, of course, contagious and may be communicated by handkerchiefs, towels, wash rags, etc., and is fostered and encouraged by bad air, filth, malnutrition crowded rooms, etc. The necessity is therefore apparent for clean, hygienic and proper school houses, decent homes, sufficient and proper food, etc. London has established "Trachoma Schools," where only trachomatous children are taught, where their eyes are not overstrained, where they are suitably fed, and where they receive proper medical attention and nursing.

Camping schools, where children are kept out doors all the time, and taught manliness, botany, woodcraft, boating, etc., and where a healthy moral tone is maintained, are very useful, and are becoming more and more popular.

City summer schools are maintained now in most all large cities. In these schools the air is cooled and the children are much more comfortable than on the crowded streets, or in the hot and badly ventilated and cleaned tenement blocks and houses. In these schools the studies are easy, and consist chiefly in lessons on cleanliness, hygiene, morals, good citizenship, travel, light literature, etc., the idea being chiefly to keep the children from the streets, bad associations, bad health, dirt, etc., and to retain the beneficial influences and discipline of school life. Cleanliness, health laws, and good hygiene should be amongst the most important things taught in our public schools, not only during the summer vacation schools, but all the year around. These should become a habit with the children. Cleanliness begets self-respect, and self-respect begets most of the good things of life. Clean habits inspire people not to expectorate under unwise conditions, to keep water-closets clean, to dislike dirty towels, and clothes, and bodies, etc. Not only should hygiene be taught in our public schools, but Normal Schools should teach this

subject to those people who expect to become teachers, so that they may thoroughly understand its practical laws when they come into contact with public school children. Teachers themselves should be compelled to present suitable medical certificates of health, before being allowed to follow the teaching profession, and a renewal of such certificates should be required from time to time, as occasion requires. Ailing individuals are not qualified to be teachers of our children.

In small towns, one medical inspector will be sufficient, but in large cities many inspectors will be required, who will be under the supervision of the chief inspector, to whom all reports shall be made. Each inspector should give certain definite hours each day to his district, but the chief inspector should give all his time to the work. Each child should be thoroughly examined once or twice each year, and from time to time as occasion requires. Diseased, or defective children should be sent home, and the parents urged to consult a physician of their own choosing. These notifications should be followed up by the inspector, teacher, or nurse, and every effort made to see that diseased or defective children are placed in proper medical hands. I am firmly of the opinion that sex hygiene should be taught in our schools. Male physicians should teach the boys and female physicians the girls. This knowledge is usually acquired in an undesirable manner, and it is best that children should be taught the truth, gently, scientifically and tactfully, after the manner described by Dr. Phillip Zenner of Cincinnati.

I am convinced that great care should be taken that children are not over-crowded with school work at the age of puberty.

I also believe that the subject of medical school inspection should be thoroughly taught in all our Medical Schools.

The medical inspector's chief assistant should be the school nurse. She has only been in existence a few years, but has amply proven her indispensability. Her salary is always entirely inadequate. Everybody loves and honors her and I have never heard a complaint of her work. In Boston in one year the school nurses visited about 23,000 homes of school children. They took 2,500 children to dentists, 9,000 to hospitals and 7,500 to

family physicians. They made 36,000 surgical dressings, looked after 3,400 cases of defective vision and 350 cases of deafness. Each nurse cares for a certain district, and its children, and parents and homes. She assists the inspector each day in his work, to whom she reports all suspicious cases. She cares for emergency cases, and treats many cases of itch, eczema, lice, etc. She takes children to dispensaries, doctors and hospitals. She cares for them at home under the doctor's orders, and makes it possible for the doctor to get good results. Medical inspection without school nurses would lose much of its usefulness. In Philadelphia in 1910, it was found that without school nurses, eighty per cent of diseased and defective children were uncared for, whereas with school nurses only twenty per cent were uncared for. The school nurse also greatly benefits the home life of her district. She teaches them decency, sobriety, cleanliness, cooking, bathing, hygiene, infant care and feeding, plumbing and drainage, etc. She is an angel of mercy in the household and renders the world better for her presence, and those communities who have once experienced the benefits of her ministrations are never willing to give her up. In many small communities, in conjunction with her other work she takes the place of the medical inspector, and does it well. She inspects the children systematically from time to time and observes them daily. She recommends medical care whenever it seems advisable, but does not treat cases herself, and must never recommend any doctor in particular; this must always be left to the family.

There is a difference of opinion as to whether medical school inspection should be accomplished under the authority of the Board of Health or the Board of Education. Such diverging views unfortunately frequently result in nothing being done at all. For instance, in Chicago, I have been endeavoring for years to secure an annual and systematic examination of the scholars' eyes, ears, noses and throats, but this beneficent movement has been prevented because the Superintendent of Schools and the Commissioner of Health could not get together as to whose shoulders the burden should fall upon. The former

feels that the Board of Health should pay the bills and do the work, and declares it would be unjust to ask the teachers to make the examinations, ignoring the fact which is attested by thousands of doctors, teachers, etc., who are familiar with the work, that this little bit of time and trouble, subsequently repays them many times over by revolutionizing the characters and teachability of many of intelligence of our Superintendent of Schools to believe that this is the real reason for not giving the order that these examinations shall be made by the teachers. The Commissioner of Health on the other hand claims that tests of this kind should be made under the auspices of the Board of Education, and that his department has not the money to have either the medical inspectors or school nurses make the tests. And thus between this conflict of opinion the poor children suffer, and one of the greatest cities in the world refuses to dispense justice to its school children. It is really too bad, the teachers could easily and quickly make the tests if properly instructed; the expense would be almost nothing and the benefit to the children would be almost incalculable. It is quite well recognized by our leading authorities that the Boards of Health should care for all diseases of school children that menace the public health, such as measles, diphtheria and other contagious diseases, while those defects of the children, such as eye, ear, nose and throat defects should be looked after by the Board of Education.

And now, as I bring this paper to a close, with much to be said that time forbids; I wish to say that one great reason for lack of progress along the lines indicated in my address, is politics—selfish, narrow-minded politics. Starting with bad appointments to Health and Educational bodies, and ending in an entire misconception of duties, the building up of political machines, and the yielding to graft, petty and otherwise, the unfortunate children of our country are continually suffering from conditions that seem incurable. I know of Boards of Education in which can be found saloon-keepers, gamblers, quack doctors, ignoramuses, corrupt politicians, etc. How much of progress can be expected of a board in whose ranks can be found men of

this description? They are placed there for political reasons only, to pay a political debt perhaps, or to cater to some political influence. How much uplift and advancement can be expected of Boards influenced by such members? Such men do not believe in high ideals, they believe in graft and politics, they call high ideals "fads," and while saturated themselves with cupidity and avarice, believe that all men are built upon similar lines and are as incapable of pure motives and benevolent inspirations as they are themselves. Such progress as I advocate is, therefore, hard to make, because those having such movements in charge are compelled too frequently to plead their cause before an unsympathetic tribunal, incapable, or unwilling to believe that there are men and women in this world willing and eager to work for the good of the cause and without hope of reward save in the consciousness of having performed their duty in that sphere of life in which it has pleased God to call them. Do not forget that if no higher motive inspires those having such matters in charge, it is financially cheaper to educate children properly in suitable buildings, and to produce and maintain a high health standard, than it is to educate them under reversed conditions, and to pay the money out supporting criminal courts, reformatories, jails, hospitals, institutions for the deaf, blind, dumb, crippled mental defectives, paupers, etc., even if we have no ambition to produce a strong race, as one generation succeeds the other. It must not be forgotten that a stronger virile intellectual people is one of the greatest assets a Nation can possess, not only in times of war, but also in times of peace, and each individual community should be willing to do its individual share in the general uplifting and improving, and strengthening of the Fatherland as a whole.

My message, as I close, to the State of Tennessee is, to get busy and take good care of its children. Build up a strong state, by building up strong children. Start systematic State School Inspection, with plenty of good school nurses. It is the best investment you can make. Do it—and do it now!

DISCUSSION.

DR. G. C. SAVAGE, Nashville: Dr. Allport's paper is so complete that there is very little room

left for discussion. As the paper was being read last night, I could not help going back in memory and imagination to the school houses that I and some of the rest of you knew something about a long time ago, and contrast them with the school houses as our friend Allport would have them erected now. I suppose my friend Hardison could describe to you the school house in which he obtained the rudiments of his education. In those days the school houses were not well lighted or ventilated. I do not know just what kind of seat he sat on when he was acquiring his early education. I imagine it was a cedar tree which had been cut half in two with a saw, with the cut surface planed, and that he sat on that sort of bench without any back to it and studied his books through the long day. I know very well that when I was acquiring the rudiments of my education I sat on a bench that had no back to it. I did not live in a cedar country, so it was not a cedar log. There was no upright window in the school house in which I attended school for several years. It was a log house. One log had been cut out about four feet from each end and that space was filled with an oblong window hung on hinges at the top, the chief purpose of which was to throw light on the so-called writing table just beneath it.

There was one thing referred to in the paper last night that some of us had the advantage of, in the long ago, and that was the open air feature of school life. The girls were not given the privilege of going out into the open air to study, but the boys were permitted to go out of the school room and sit under the trees. I remember very well to have gotten many a lesson lying on my stomach on the grass, with my open book resting on the earth. These were not advantageous conditions under which to study. I am sorry we did not have better advantages.

My friend Allport, for whom I have the greatest love and respect, seems to be behind the times as to Tennessee. He asks us in the close of his paper to get busy in Tennessee, and see that school inspection is undertaken. That thing has been going on in the City of Nashville for a long time, and it has been a very great help to the poor unfortunate and afflicted children in our public schools. There has been opposition towards this inspection, but not among the officials of our city, and I do not believe intelligent officials will oppose school inspection when properly understood. When a note has been sent by the inspector through the Superintendent of the school to the head of the family, suggesting that the child has something the matter with its eyes, nose or throat, the mother will take that child to a person of her own selection, and usually at the first visit she is as mad as a wet hen against the inspector. They have all sorts of words of abuse which they pour out against the inspector because

he has found something wrong with the children. I have been able to soothe the mother by telling her that this or that condition exists in her child, as detected by the inspector; that it might have gone on and become serious but for the inspector's discovery, and now the child can be relieved. Especially is this true of trachoma. School inspection is one of the things that ought to be established in all cities, in all towns, in all country districts, and the inspection should be made at intervals sufficiently frequent to find out something about any changes in the physical conditions of the children. Great good has come already to the children of this city because of the inspection that has been carried on so efficiently by two of our members, Dr. Roberts and Dr. Moore. They are doing this work thoroughly and efficiently and great good will come from it. I feel that I have added nothing to the strength of Allport's splendid paper. Should I speak ever so long, adhering strictly to the truth, I could not detract from it. Study this paper and put its teachings to practical tests.

IMPORTANCE OF MEDICAL LECTURES IN RURAL SCHOOLS.*

By W. Scott Farmer, M. D.,
Cookeville, Tenn.

I believe it was John Fiske who remarked that it takes a thousand years to raise the human family a single notch. We meet and have our medical societies, and discuss diseases in their different phases, and congratulate ourselves on the rapid strides we are making, and, in some instances, the marvelous cures, and yet when we return to our homes, and visit our patrons, we find many of them wearing bags of asafetida around their necks to ward off an epidemic, or buckeyes in their pockets to prevent sickness. We also find the foolish believing in some instances that diseases are devils or evil entities entering our bodies. We also find those who believe there is no disease or pain, and will rashly make such statements in the presence of plainly apparent physical pain, thus showing absence of common sense. The above shows to us conclusively that the mental efforts are not all dead by any means. At the convening of our Legislature our State Society al-

ways drafts a number of bills and presents them to that august body, and it is often the case that they are not given due consideration, and it is often thought that the medical profession is building up a machine to oppress the people. We know that for centuries man has tried to turn back disease, or, at least, tried to control disease by cure, and we also know we can count on the ends of our fingers the diseases we have a specific for. We also know that in the future hygiene or preventive medicine will be the rational course to pursue. At no period in history has this truth been more forcibly shown than in the last quarter of a century by the triumphs of hygiene over yellow fever, and we may also add typhoid fever. This broad application to the masses brings wholesale health. Business has profited greatly by the triumphs of hygiene over yellow fever, and government, morals, and all elements of civilization have profited also. While this is true, many people in our rural districts have not yet heard of these things.

The school is the one place that should have the advantage of medical lectures on hygiene, and then we could reach every community, one and all. We all know that health is the basis of all wealth, power, and happiness. This is plain to any one. Hygiene promises more good to the human race than any other science, and I firmly believe that every public school in our state should have a competent medical man to lecture to them occasionally. Some one may say this is not practical. To that I concur to a certain extent, but it is to my mind an ideal way to enlighten the people along the lines of progressive medical thought. In almost every community of our state where there is a public school there is also the neighborhood doctor, and if the local physician could be enlisted in this good work, it would not only serve as a sort of post graduate work for the physician, but be of inestimable benefit to the community as well. A few years ago it was not considered ethical for a medical man to appear before a lay audience, but that barrier has been removed, hookworm experts who frequently chase a case of uncinariasis from one county to another, and administer a dose of thymol to that patient, whether he wants it or not. If

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it is good to free our people of hook worms, and we all know that it is, why not good that we should also enlighten them upon other diseases? In theory the health of school children, its provision, and its protection have come to be the foremost factors in their education. In practice it is far from being so. The reason for the perpetuation of unhygienic conditions is in many cases a lack of knowledge of the facts and remedial measures on the part of those upon whom the physical as well as the mental care of the school child depends. When we consider the fact that there are twenty million, or more, school children attending the various schools of our country, and that the future destiny of our nation is dependent upon them, how essential, then, it is for them to have normal vision, and be free from any other physical defect that may prevent them from becoming healthy men and women. We all know that the school period marks an important epoch in the evolution of the child. The nervous system during this period is as yet not fully developed, is as yet unstable, while the atmosphere of school life adds a heavy tax upon the general vitality of the child, and interferes with its normal intellectual development. It is, indeed, a conservative estimate to state that some forty or fifty per cent of the school children of our country have some physical defect that could and should be corrected if they had the proper instruction and training along these lines.

Necessity of popular information and a knowledge of the laws of health, with the consequent live desire to live hygienically, is one of the great needs of the day. The new governor of Michigan, Honorable Woodbridge N. Ferris, in his inaugural address delivered before the two houses of the Legislature of this year (January 2, 1913) said: "For more than a quarter of a century I have made a careful study of the school houses of Michigan. The majority of them are unsanitary and unfit for live stock to occupy. They rarely furnish adequate light, never furnish a proper supply of fresh air, and are not comfortably heated, and, on the whole, are destructive to the health of the school children. It should be remembered that the ordinary school room, unlike the ordinary dwelling

room, is frequently occupied by a large number of children. Probably no one reform would exert a greater influence in reducing the death rate of children than would the construction of sanitary school houses. Ordinarily school officers know very little about modern sanitation. It is largely a question of how large a pen is required to protect the boys and girls from inclement weather." Said he, "A law should be enacted whereby all plans should be submitted to the Superintendent of Public Instruction and Secretary of the State Board of Health." Said he, "These officers would approve of lighting, heating, ventilating, in fact all sanitary essentials, before contracts could be entered into for construction." The above is from the Governor of a great state. The same conditions confront the people of Tennessee. Many of our school houses in our state have been designed by some third-class carpenter who does not know any more about hygiene than a monkey in a menagerie knows.

Many of our people have never heard that tuberculosis is contagious. We still find them fighting vaccination to prevent smallpox. They cannot appreciate the great value of typhoid serum in the prevention of that much to be dreaded disease. They cannot understand why a child that is apparently dull and stupid can often be converted into a bright and healthy one by a proper treatment of chronic enlarged tonsils and adenoids. We also find that many of our people have not been properly trained in oral hygiene. They often take only a passing interest when some physician tells them that the mouth is the door through which many germs enter, and serves as an incubator for the same. They have not been taught that without normal physical and intellectual development no race of people can survive, much less make development. It has never been impressed on our school children that soap is the greatest civilizer of mankind, and that cleanliness brought about by frequent bathing is one of the best preventatives of skin disease. In fact, I am sorry to say that many of our people take more interest in their stock from a sanitary point of view than they do in their children. Who is responsible for this state of affairs? I unhesitatingly say the medical profession to a great

extent is responsible for the lack of interest so often displayed by the laity. While it is true that in the more intelligent and prosperous communities, and in many of our city schools, better conditions exist, in many of our rural schools a lecture by a medical man was an unheard of proposition until our hook worm experts took the field, and in many instances, as I have been informed, the people thought their theory a hugh joke. Every grade of society is compelled to deal with alcoholism and social evils, which, together, constitute its greatest problem. Not how to create a desire, but how to suppress a desire that is either natural or acquired, is the task. The last few years have brought forth powerful agencies for the teaching of the public. Tuberculosis exhibits, milk shows, infant mortality crusades, child welfare exhibits, social settlements, are examples of these. Wonderful as are the results of these campaigns, it is evident that the school offers the one opportunity to reach every person. Here general principles can be taught at an age when they influence the after life, and special information be given in an orderly systematic manner, so that a clear impression can be made.

So far as I know, the town I represent, Cookeville, is the only small town in the state that has weekly medical lectures in her public school. Last September at the opening of our public school a department of hygiene was organized, with the local profession of our town at the head of the department. We try to have one lecture a week, every Tuesday, either by some member of the local profession or some visiting brother. We have lectures on the importance of oral hygiene, enlarged tonsils and adenoids, discharge of the ears; of the eyes, trachoma, foreign bodies, and eye strain, etc.; ecchyma tinae tonsurans, and pediculosis of the scalp; of skin diseases, scabies, ecchyma, ring worm, etc. On school room hygiene we have dwelt upon lighting, heating, and ventilating, the proper kind of seats, the source of atmosphere pollution of school rooms, tardy pupils, noise, etc. We have lectures on the prevention of infectious diseases, the great value of personal hygiene. We have exhibited to the pupils of our public school anti-toxin for diphtheria and explained

the process of manufacture to them, have also had typhoid serum exhibited to them, and explained its uses, as well as modern sputum cups, sanitary towels, separate drinking cups, etc., and many other things too numerous to mention. We had hardly got started in this good work until smallpox broke out in our town, and many of our people had never been vaccinated, and in many instances opposed vaccination, but we vaccinated every teacher and pupil of our school; and, while many of our citizens objected to vaccination, we did not allow any child to enter our public school who had not been properly vaccinated. To-day we have between four and five hundred pupils who have been vaccinated this year, and the majority have recently been examined for hook worm. We also have offered a prize to the child who has a mouth at the end of the session in the best sanitary condition. We have also offered prizes to both the male and female for the best essays on hygiene at the end of the session. And as a result today, as I am reading this essay to our State Medical Society, we have between four and five hundred pupils competing in this essay contest on hygiene. Our pupils are taking a great interest in this work, and in turn have stimulated their parents to wake up from a state of lethargy that has long existed, and they, too, are taking interest along hygienic lines.

In closing I want to appeal to the members of this Society to give an occasional lecture to our public schools, especially of the rural districts, as it will not only be good for the profession, but will also show the people that we are genuine altruists, and next to the ministers of the gospel we are the foremost men in all this world. We should remember that we cannot pass through this world but one time, and we should

“Do all the good we can
To all the people we can,
In all the places we can,
In all the ways we can,
And just as long as we can.”

DISCUSSION.

DR. DEERING J. ROBERTS, Nashville: I do not rise to discuss this paper, for it is so full of merit and so practical, but simply to heartily commend it. The practical truths so vividly de-

lineated there are known to nearly all of you, but the trouble is they are not known to our people; and in connection with this paper, which is of so much importance to the general public, and also the paper of Dr. Lackey entitled, "Pediatric Practice in Small Towns and in the Country," I wish to make a motion, and it is with a view to general publicity. The address of the President last night was of a general character to which the public was invited. By publicity and by educational instruction, we will come nearer to getting rid of charlantry, ignorance, and like evils which so harass, embarrass and curtail the successful results of the general practitioner more than anything else. Therefore I would make this motion: Be it resolved, That the Secretary of this Association be instructed to present copies of these papers at an early date to leading secular papers of this city, Knoxville, Memphis and Chattanooga, and request them, if possible, to have them published at early date in some one of their Sunday editions. Of course, we will get these papers in our journal in due course of time, but the circulation of our publication is only about 1,600 copies, or 2,000 at most, and solely among ourselves.

Motion seconded and carried.

DR. A. F. RICHARDS, Sparta: I do not feel capable of discussing Dr. Farmer's paper, but there is one point that I feel like emphasizing and insisting on being brought into practical use. That point pertains to the subject of prevention of diseases and sanitation. Whatever good the medical profession may do will come through the teaching of the school children of the State. I have found from observation and experience that whatever work we have tried to accomplish in my county by public lectures to the parents has not been altogether a practical success. The parents of the children have something else to do. They are not as susceptible to teaching as the children, and I believe that the secret of success lies in the instruction of the school teachers and the school children. I know of no better way than the system he has inaugurated in his own town. The publicity of these articles in the lay press of the State would probably do a little good, but the general reading public are not capable of reading an article in a daily paper and deciding whether it is an advertisement recommending some patent medicine, or whether it is really intended to instruct the people. You know yourselves that when you take up a daily paper and read of some long spun out theory and know nothing about it, you are inclined to ask yourself the question as to what prompted this? Take the school children, who have no convictions along these lines, with an open, receptive mind, taught by a doctor of the community or teacher in whom they have implicit confidence, a greater percentage of good is done to them than in any other possible way.

I want to subscribe especially to Dr. Farmer's idea of inaugurating systematic instruction on hygiene in the public schools.

DR. HIBBETT, Nashville: I was very much impressed with the doctor's paper, and I dare say even the larger cities of this State could learn from the suggestions that have been thrown out today. I want to say that one of the best papers that I ever heard on school hygiene is the one that has been presented by Dr. Farmer, and I congratulate Cookeville that it has such up-to-date methods and such an up-to-date profession. The salvation of our country from a hygienic standpoint depends more largely upon proper instruction in schools than upon any other point, and I heartily endorse what was said regarding instructions to the young. From my observation and experience in social work in Nashville the greatest good and best results have come from organizing the young boys and young girls. They are very receptive. They have not been poisoned with a lot of opinions as have their fathers and mothers, and they can be drawn out along new lines.

There is one thing I want to suggest about vaccination certificates. We are all wrong about granting certificates of vaccination as soon as a person's arm is scratched. We are having a lot of trouble because of this practice, and we will always have it, unless we change our method. I have called the attention of the profession of Nashville to this point. Successful vaccination is more than scratching the arm and rubbing on a sterile point. Unfortunately most of the vaccines we get have been stored away on shelves in drug stores, and vaccination points are carried around in pockets for a few hours, rendering them innocuous. Unless these points are kept on ice you might as well not use them. We had occasion some time ago to do about one hundred vaccinations, and out of this entire number of primary vaccinations only one was apparently successful, which in this case was nothing more than an infection. I believe in the State of Tennessee we ought to have a form of certificate that would read something like this: I have this day vaccinated so and so, not that I have successfully vaccinated so and so. After doing a vaccination, do not sign the school certificate immediately, because you will thus put yourself between the child and the school law of the State, and in many instances you have not vaccinated these children any more than if you had only scratched them with a penknife. Do not give them the permanent successful vaccination certificate furnished by the schools until they have shown unmistakably that the vaccination has taken.

DR. OLIN WEST, Nashville: I heard my good distinguished friend, Dr. St. John, of Bristol, tell about an old man who lived to be about 140 years of age, and on the day he quit using tobacco he died. (Laughter.) That illustrates the

point that has been made here two or three times today, that there is no use in trying to teach an old dog new tricks, and, as Dr. Richardson says, the efforts we make to educate the older people by ordinary public lectures are to some extent wasted. They do some good, but the place to do the real good is in the public schools. If you can give the children of the public schools an example of what ventilation will do in the school room, they will soon convince the elders at home that the stuffy atmosphere in a living room is not the proper thing.

I want to commend Dr. Farmer for the magnificent work he has done. Dr. Farmer's paper could be utilized to emphasize a great many points of importance. For instance, how the medical profession can be useful in getting hold of the schools and forcing progress. That has been done in Cookeville by the organization of a Board, with Dr. Farmer at its head. They have demanded since this work has begun by the medical profession in Cookeville that certain things be done in these schools, and they have done it, and as a consequence of this particular work the schools of Cookeville are now in better condition than they ever have been in the past.

I get from all over the State statements from local professional men at various points to the effect that 'our people will not listen to us about these things.' I got that same sort of statement from some members of the profession in Putnam County before Dr. Farmer began his work. In going down the Tennessee Central Railroad I had a chance to visit Cookeville and see the tremendous benefit which has been derived as a result of the work of the profession in that city in the public schools. I believe that what has been accomplished by these gentlemen in Cookeville can be accomplished in every town in Tennessee, and to a lesser extent I believe it can be accomplished in every school in Tennessee, and not only do I believe that you will get practically almost immediate results from a sanitary standpoint, but I believe that it will widen the influence of the medical profession in every direction more than anything else could do.

DR. FARMER (closing): I want to thank the members for their discussion of my paper, although I cannot add anything to what I have already said.

In regard to Dr. Hibbett's suggestion about vaccination, we do not issue any certificate until two or three weeks after we have vaccinated, and if it is not a typical take, they are required to be re-vaccinated. I want to make that explanation.

I think great good can be accomplished along these lines, and the time is ripe for the medical profession to take up the good work.

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PEDIATRIC PRACTICE IN THE SMALL TOWN AND COUNTRY.*

By W. Nicholas Lackey, M. D.
City Health Officer,
Gallatin, Tenn.

My reasons for presenting a paper of this kind, are two:

First, the crying need for Pediatric work in many rural communities; and the opportunity thus afforded for men in general practice who will fit themselves to do reasonably up-to-date work in this line.

Second, that during the last few years a great crusade has been waged against infant mortality. The child's welfare movement has attained great proportions in the cities, but in spite of this agitation, as yet only a faint ripple has disturbed the placid calm of indifference in many of the small towns and country districts.

In the country marriage usually means pregnancy within a very few months, for there is no race suicide there. The corn crop may fail, but the baby crop is nearly always a bumper one. Owing to this fact every physician in the country sees many sick children. That he should be as capable as he often is an obstetrician, no one will deny. That his knowledge of this branch is frequently inadequate, he himself will often admit. In many schools the instruction on this subject is far from what its importance demands.

*Read before Tennessee State Medical Association, April, 1913.

and the average student does not avail himself of what is offered, as his time is so taken up in watching major operations, which it is only remotely possible that he will ever be qualified or have the opportunity to perform, but then every student hopes to be a surgeon and few of them have much ambition to become simply good general practitioners. To his youthful imagination the drooling infant has no appeal, till on that never to be forgotten day, with the friendly assistance of his most trusted professional associate, he becomes the proud but frightened father of one of those little lumps of clinging humanity. It is only then, that this branch of medicine will assume in his mind an importance never before dreamed of.

For the young man beginning his professional career a knowledge of pediatric work will create a reputation and give a foothold in establishing a practice, as soon as anything I know. For one woman, whose baby's life he has saved, will give him more advertisement in the community than a full page ad. in the "Ladies' Home Journal."

I have long contended that every physician in the country in addition to his regular work, should have some branch that he has especially perfected himself in by post graduate work, backed by an up-to-date set of books and several journals devoted to the subject. I will add, that he cannot find one in more demand or more lucrative than that of diseases of children.

If the country doctor takes his proper place in his community, to do good, he must enlist beneath that battle-scarred but already laurel draped banner of preventive medicine, and become a Pedotrophist as well, to use a word coined by (1) "Hoag," which means care of children. For this prophylactic work is equally important, as most children are free from disease at birth. It is also the most difficult to beat into the heads of the mothers. Woods Hutchinson has said, "The first doctor was a woman, and I might add that the first pediatrician, through necessity, must also have been a woman. You will find her loath to render up her title when you first attempt to instill into her mind modern methods of caring for her children.

While, of course, the half-done pediatrician

such as I have described, cannot claim the knowledge of the subject, that the highly trained children specialist of the city possess, still, to say the least, he will be a great improvement over the superstition befogged, catnip tea, gutstuffing school of infant slaughter, with a militant grandmother officiating as dean, ably and vociferously assisted by a faculty of negro mammy's and meddling female busybodies. Certainly, he is far superior to the old foggy practitioner who believes the only difference between treating a baby and an adult is the difference in the dose of some nauseating shotgun mixture that he pours into the child's already revolting stomach. 2 (Kerr.) Such a one fails to realize the great contrast between the adult and the infant, and the marked difference which relates particularly to etiology, pathology, symptomatology, diagnosis, and treatment. 3 (Kerley.) The various therapeutic measures other than drugs that play such an important part at the present time in the treatment of children, such as diet, fresh air, cold, heat, massage, electricity, climate, etc., seemingly are a sealed book to men of this kind. "Really successful therapy when applied to the child, demands a knowledge of detail greater than in any other kind of work." Right here let me say that the harm done sick children, owing to the struggle to give them medicine with a taste that would produce emesis in a healthy crawfish, has never been estimated. (4) Fantus has succeeded with the aid of sugar and cocoa butter, pressed into tablets and afterward sprayed with the flavor desired, in perfecting the candy form for about twenty remedies. The use of these, and others now on the market, and a little care in improving the taste of your mixtures, will do much to avoid this fault in drug therapy, and to improve your standing as a physician with both mother and child.

In spite of the more favorable environments of the country on the child, pediatric practice is more difficult in some respects than it is in the city. The city mother through the influence of her better trained obstetrician and pediatrician and the educational effect of mother's clubs, child welfare leagues, etc., is in a position to be better educated as to the

proper care of her children. Even the women of the slums have the benefit of the persistently applied educational methods of the City Board of Health, free clinics, milk depots, and most important of all, the visiting city nurses. The country woman, as a general thing, has not evinced, at least in my locality, much enthusiasm "In raising the baby by the book," as she disparagingly calls it. She usually skips even the excellent articles on the subject, that have appeared so frequently during the last few years, in the several woman's magazines, in her eagerness to find the latest embroidery pattern, or to see the newest thing in hats.

The physician who attends the country woman during her confinement frequently leaves without giving any instruction about the baby at all, so that its care falls to an ignorant and superstitious black mammy, or worse still, a grandmother of the old school, whose list of diseases while only embracing worms, teething, croup, summer complaint, bold hives, and tight prepuces has a pharmacopeia of mixtures that, in comparison, would make some of the famous brews of remote antiquity taste like ice cream sodas. She believes because the baby cannot talk and tell you the story of its life, that doctors can't find out what ails them anyhow, forgetting that the mother and herself can usually supply a superabundance of conversation on this, as well as many other subjects, not always necessary to the elucidation of the child's history.

Her usual dietetic rule is to give the baby a taste of everything you eat after cautioning you first to chew it for the child. She firmly believes sweet potatoes are a panacea for summer diarrhea, that pot liquor improves the child's digestion, that sheep nanny tea will break out the measles. She sees no danger in strawberries, bananas, and at times even cabbage, as the violent and oftentimes fatal digestive disturbances thus produced she attributes to teething; she knows, for she has raised several of her own in spite of this dangerous menu; the Lord is credited with having taken the rest. While she will poo-poo your new-fangled notions of baby raising, as she calls them, she will fall over herself to read a government bulletin or any other article on the

scientific way to raise her own fancy breed of chickens.

While in justice it must be admitted that most of my brother practitioners do give instructions to the mother as to the care of her new born infant, yet it is often done in an unimpressive and halfhearted manner, as he is saying to himself, "What's the use of me wearing out my mouth, you won't do what I tell you to do any way." His remarks fail to make the impression desired on her mind, so that when the occasion arises she turns to the only other source for her information. It is not strange then that the baby is drenched with teas or that a piece of fat meat, tied to a string is placed in its mouth to cut the phlegm out of its throat, or that breast milk is dropped into its eyes to cure conjunctivitis, or that the blood of the betsybug dropped into its ear for earache, or that many other equally as barbarous, disgusting, and nearly unbelievable remedies are administered to the helpless little sufferer. I myself, when an infant, fell a victim to the betsybug method of treatment administered by my black mammy, during the absence of my mother, this is why I speak with so much feeling upon the subject.

The Agricultural Department has at last succeeded in teaching many of the farmers that the application of practical scientific methods in the breeding, and care of domestic farm animals not only protects them against disease, but greatly enhances their value. But as yet it is difficult for the people of the country to realize that if it takes some intelligent care to raise a fine pig, how much more scientific care is required to raise the most helpless and delicate of animals, the baby. Thirty babies die out of every one hundred born during the first year, with a mortality as high as this among farm animals, the farmer would ultimately drift into bankruptcy; but as the successful raising of these animals concerns the pocketbook, they receive the care and attention of highly trained government experts, while the helpless baby, supposedly the darling of the home, if providently inheriting a strong constitution survives in a certain percentage of cases, in spite of the lack of the simplest rules of hygiene and usually on a diet that would convert in a month

an ostrich into a sour visaged dyspeptic.

Even the milk on the average farm that the city people so fondly imagine to be pure, contains as many if not more bacteria per cubic centimeter as does many of the inferior grades sold in the city. The reason for this is easily explained, as the milk and its handling is given over to the dirty and usually ignorant negro farm hand who milks the uncurried cow in a dirty stable or barn lot, often with unwashed hands, paying no attention to the cow's unwiped udder, using an old-fashioned wide mouth pail admirably adapted to catch the dropping particles of dirt and manure, the milk being totally unprotected from the swarm of flies that always abound, the milkman's attention being distracted by his vain efforts to hold off the sucking calf by hitting it on the nose with a club.

While the fool mother is no more indigenous to the country than to the city, she has more opportunity to kill her baby during the doctor's absence, as the trained nurse for many reasons is not so available. It devolves upon you to train her, especially during attacks of severe illness in her baby, to turn a deaf ear to meddling advice, and obey your orders unhesitatingly like the soldier on the firing line.

"For there is no truer saying than that she holds your reputation in the hollow of her hand." Always write your directions when giving the mother instructions for treatment. A printed diet list of the more frequently used foods and their preparation suitable for the feeding of sick children, will save the doctor much time, as he can check off the foods to be administered.

After the birth of the baby considerable time should be spent in explaining in the most interesting and enthusiastic manner possible how it should be cared for. As the mother is prone to forget your instruction on account of their number, place in her hands for future reference one of the several excellent little books written for this purpose. Every mother in the country should have a thermometer so she may dispense with all guess work on her part as to the child's temperature before the physician is called, or during its subsequent illness. Explain the importance of a prompt examination of every

sore throat for fear that it might be a case of diphtheria, dwell also on the fact that when in doubt we always give anti-toxin, that a persistent pain in the belly is not always due to colic, that it might possibly be appendicitis, that referred pain from pneumonia is frequently felt in the same regions. That the so-called growing pains are frequently a manifestation of rheumatism which is prone to involve the heart in children. Teach her to stop feeding and give oil and a carbohydrate diet on the first appearance, especially during the summer, of abnormal stools or diarrhoea, and in older children to restrict the child's diet on the appearance of fever from any cause, as the temperature may provoke an attack of indigestion on top of any disease the child may be contracting.

In the country diseases of the respiratory tract seemingly are more prevalent during the winter, than are gastro-intestinal disorders during the summer, and for this reason teach the mother that colds are nearly as contagious as smallpox, and to isolate the baby from other members of the family suffering from colds or influenza. Impress upon her the dangers from the barbarous custom of kissing and the importance of baby having its own individual handkerchief and not the one used indiscriminately by the mother on the running noses of the other youthful members of the family, that the dust free, well ventilated and clean nursery, with as much time spent in open air as the weather will permit are among the best preventives against this curse of civilization, colds.

Earache in the country is usually looked upon with unconcern and treated as a disease rather than a symptom of otitis media, or inflammation of the internal auditory canal. This practice has resulted in several instances in attacks of mastoiditis which terminated fatally. While every physician is not expected to be an otologist, he can with a little practice learn in most instances to recognize a bulging ear drum in time to have it incised before serious damage has resulted.

Not only does scarlet fever, measles, pharyngitis, etc., give rise to dangerous ear complications, but in my experience they follow influenza more frequently than any of these diseases named.

Don't be misled by the absence of pain in the diagnosis of middle ear disease for it occasionally occurs with fever as the only symptom.

Educate your patients to the importance of a prophylactic dose of antitetanic serum for nail wounds and other wounds, especially about the feet, especially frequent in the country child, on account of his disinclination to wear sandals. The refusal of this harmless procedure has cost many lives in my community.

It has been said that there are probably two thousand children in Tennessee being nursed by negro women who have consumption and I might add, though I would not venture to say, how many, are being nursed by negro girls who are consciously or unconsciously the victims of gonorrhoea. In my practice I have had three girl children and a boy of two years infected with this disease from this source. This disease is known among negroes as the "running range" and in the women is practically never treated.

The urine of babies is not examined as frequently in the country, and even in the city, as it should be, on account of the difficulty of securing a sample when the catheter is not used. I employ a method suggested by (6) Kilmer of placing a wad of cotton in female children over the vulva, held in place by the diaper, when this becomes wet it can be squeezed into a vessel. The same method can be applied to male children, but the better way is to use a condom or finger cot over penis and scrotum, which may be held in place by a tape around the child's waist.

The examination of the urine of every child having chills or rigors, the child becoming cold and pinched and running a continued fever of remitting type will once in a while, as happened to me, change the diagnosis of malaria, or typhoid fever, to pyelitis, which is, according to (6) Hatch more frequently responsible for these symptoms, especially in girl children than any other condition in infancy.

On account of the distance and resulting expense of calling a physician the people of the country are more prone to resort to patent medicines than are people in the city.

This is further encouraged by that blot on our civilization, the traveling patent medicine vendor, who goes from house to house in the country with his wagon load of linaments and often dangerous nostrums. Much can be done to fight this practice by education and by supplying the mothers with a few harmless remedies to be kept in her medicine cabinet to be used as home remedies for the more common, simple ailments.

This is far better and safer than having your little patient dosed with cascara, syrup of pepsin, castoria, doped with the so-called teething powders or the numerous varieties of baby killing soothing syrups.

The necessity for artificial feeding is much rarer in the country than the city, for when it comes to an appreciation of the importance of maternal nursing, here at least is one point on which grandmothers, old lady neighbors, and negro mammy's all heartily and enthusiastically agree with the doctor. The only trouble is to ever get them to wean their children at all. I have often seen children two years old surreptitiously leading a too fond parent to some secluded spot in order to perform in private this maternal function. I have seen three cases of rickets in children that were nursed too long without other proper additions to their diet.

When from failure of maternal feeding the question of wet nursing the child arises, the country doctor is indeed in a quandry, for it is rarely ever possible in the South to obtain any but a negro wet nurse, and in all but a few instances the negro wet nurse has been, on account of racial traits of character, an absolute failure in this role.

In giving instructions for artificial feeding a printed prescription blank to facilitate the mother in preparing the milk mixture and administering them to her child will be found most useful. Her interests can also be much stimulated in the subject by furnishing her with and showing her how to keep a weight chart.

While any extended discussion of artificial feeding, probably the most difficult problem in pediatrics today would be out of place in a paper of this general character, it will suffice to say, that since the publication of the

studies of Czerny and Keller carried toward their logical conclusion by Finkelstein and his school, I have abandoned the difficult percentage system of feeding which has done so much to drive doctors and mothers to the use of the numerous proprietary foods on the market, in favor of the simpler feeding methods of fitting the food to the baby and not trying to make the baby fit the food, as each infant's nutritional requirements is a law unto itself. (7 Levy). For determining its requirements we have the age of the patient, its weight, the weight of the average normal child, and the principle of caloric feeding, this procedure renders this work simpler for the doctor and the mother, and exceedingly important point for the work in the country.

Gastro-intestinal disorders during the summer are much more frequent in the country in proportion to the infant population than people in the city would imagine. The reason for this is the average mother's nearly total lack of knowledge of the proper diet for her child, the improper care in handling milk, the swarms of flies from the nearby stable yard, the farm houses frequently being unscreened, these and other unsanitary conditions, combined with the high temperature, which is only slightly less oppressive than that of the city, tends to produce the usual rise in death rate familiar to the city physician during the summer.

Morse gives voice to a hope much desired by all when he says, "That with increasing knowledge of the bacteriology of the intestinal tract in infancy some simple method will be evolved which will make it possible to readily differentiate between diarrhea due primarily to chemical changes in the intestinal contents and the disturbances of the digestive functions dependent on them, and those due primarily to bacteria. At present it is extremely difficult to distinguish between them, and correspondingly hard to know how to treat them.

In conclusion, allow me to say by way of recapitulation, that the indifference to and lack of interest on the part of many members of the profession in the country to pediatric

practice and the modern care of children, the ignorance and prejudice of most country people against any change in their long established unscientific methods of raising their children; the deplorable lack of sanitation on the average farm, which has so frequently and so forcefully been brought to your attention by Dr. Stiles and Dr. Olin West in the course of their work for the eradication of hookworm, all combined to do much toward giving us an infant mortality in the country that will come as a surprise to many of you who are engaged in the practice of medicine in the cities.

DISCUSSION.

DR. H. H. SHOULDERS, Nashville: So interesting a paper as this which has been read by Dr. Lackey should not pass without discussion. I never was so impressed with the facts as he has presented them this afternoon as when going over the statistics of Tennessee. It is alarming that one-fourth of our deaths occur in children under five years of age. You have heard that quoted before, and it gets old to you, but it means something. It means that there is something the matter, and Dr. Lackey has pointed out some of these defects. It seems to me that if the proper credit were given to the individual who really saves the most lives, however scientific some other problem of medicine might be, we might get better results. It seems to me that we will not get results by the distribution of literature in the ordinary way. It is going to take the personality of the family physician to instruct and interest the people in the very principles outlined by Dr. Lackey. So I think it is, to a great extent, up to the medical profession to give proper instructions in the homes which they enter, which will finally accomplish the end sought.

DR. LACKEY (closing): I appreciate your kind reception of my paper. I have nothing to add to it except to say that by the methods of education, such as I have outlined, we have been able to reduce the death rate in children under one year of age, in Gallatin, 33 1-3 per cent in the period of four years. While we would not claim that this marked reduction in death rate is due entirely to the work of our health department, but we feel that it should at least be credited for some of the reduction shown.

THE BUSINESS SIDE OF MEDICAL PRACTICE.*

David L. Flanary, A. B., M. D.
Dyersburg, Tenn.

Physicians, since the days of Hippocrates, in all lands and in all times, have been generous beyond all other classes in charitable deeds. But the physician of today, as never before, must have money to pay for long medical courses, for instruments, books, journals and post-graduate work, if he is to give his patients such services as they need and as the times demand.

Since my paper will not deal with any narrow specialty or disease, on the scientific side of medicine, I feel free at this opportune time to indulge in a few remarks relative to the physician, his family, and the business side of medicine.

The evolutionary spirit for the elevation of the business side of our profession pervades this entire country. An opportunity full of possibilities now presents itself to this body to manifest this spirit by inaugurating a resistless movement for the elevation of our financial as well as educational ranks.

Contract Practice.

Whatever may be our personal opinion in regard to the merits of contract medical practice matters but little. There are two factors of which we must take notice: (1) It is already firmly organized and flourishing in our midst. (2) It has come to stay. With these facts in mind, our thoughts and efforts should be directed toward its proper regulation and control.

In the short time at my disposal it would be impossible to deal exhaustively with this system in general, or to describe minutely those in vogue in the various countries. I have, therefore, selected the system of Austria and Germany to show to what extent it has been carried in almost all the countries where it has been for some time. And have selected England and the United States to show how this system is spreading and why we should, now, put a control on same in this country.

In Austria, as the result of a law enacted in 1888, insurance against loss of pay by sickness or accident was made compulsory for all engaged in manufacturing, trade and commerce. Company officials were exempt, if proof was furnished that they were protected in other ways. This industrial insurance is administered by organizations known as *Kranken-Kassen*, which take their names from the limitations of their scope.

An idea of the increasing popularity of the Kassa system may be had from the following report: In 1890 there were 1,548,825 members; in 1905 there were 2,844,245 members. This shows an increase of 83 per cent. At this time the little country of Austria has more than 4,000,000 people receiving free medical attention.

Out of 9,204 physicians in Austria, over 30 per cent have a total income of less than \$240 a year. In Bohemia the conditions are more unfavorable than in Austria.

The Kassa system in Austria is entirely in the hands of laymen, who neglect no opportunity to further the miserable fees paid to the profession for their services. Any demand for increased fees are met with flat refusals, for, with little or no organization on the part of the profession, the directors know that others are waiting to take the places of those that resign. The fees have been reduced until now the Kassa physician only receives 42 cents per member per annum for medical attendance. The continuation of the present system can only mean a deteriorated medical profession, with a baneful effect upon the community at large.

The German medical literature is quite silent on the subject of Kassa practice, because it is under State control. But Dr. Wm. L. Holt, member of the American Society of Medical Sociology, in giving his own observations in regard to the Kassa system in Freiburg, gives us a fairly clear idea of the situation. There are in Germany some 23,000 Kassa with a membership of over 20,000,000. Insurance is compulsory on all whose income is less than \$480.00 per year. It is kept up by the laborers paying 2-3 per cent of their daily wage and the remaining 1-3 of one per cent is paid by the employer.

*Read before Tennessee State Medical Association, April, 1913.

The Kassa fee bill was adopted in Germany in 1872, and is as follows today: Office call, 19 cents; day visits, 24 cents; night visits, 96 cents; minor surgical operations, such as passing a catheter or opening an abscess, 24 to 48 cents; reducing a fracture, dislocation or strangulated hernia, together with normal childbirth, \$1.20; and major surgical operations, \$2.40 to \$3.60. Again this scale would not be so bad if paid in full by the Kassa. But frequently the amount paid is 40 per cent of that charged.

The fee bill just read is much better than it was prior to 1904. In that year it got so bad that the entire profession organized and refused to do any work, unless the patients were allowed free choice of doctors and a raise in fees. The result was free choice of doctors and the raising of medical fees 66 2-3 per cent.

In England, industrial insurance was voluntary until Lloyd-George introduced his famous General Insurance Bill in 1911, making insurance compulsory to all those with an annual earning under \$800.00. This insurance bill extended benefits to approximately 15,000,000 people, and was thought to be by laymen the greatest measure before Parliament in two generations. It is kept up by the men contributing 8 cents per week, women 6 cents, employer 6 cents, and the State 4 cents, per person. Those over 65 years are exempt and those over 50 years of age receive reduced benefits. The allowance in case of illness is \$2.50 weekly to men and \$1.75 to women for a period of three months, after that \$1.25 per week to both, and a disability of \$2.25 per week. The fee for medical and surgical service, under such a system, amounts to \$1.00 per member per year.

As a result of the British Parliament passing this bill, the profession in England has been aroused and united in a way never before realized. Mass meetings have been held and the measure condemned by the British Medical Association, the General Medical Council, the Royal College of Physicians and Surgeons and many other prominent Societies. With a united profession, the British medical men are in a position to demand a scale of prices commensurate with the service rendered and befitting the dignity of a profes-

sion which today is making greater demands upon its members, than any other calling or profession in the world.

So, we see, the effect of contract practice upon the profession in foreign countries.

In the United States we meet here and other places from Canada to the Gulf and from the Atlantic to the Pacific and read papers on all phases of scientific medicine. We carry on our research work in every line, bring out inventions and discoveries of every nature for the public good, but for same we are not receiving proper compensation.

We never give the business side of medicine any thought, and we are fast drifting into the horrid condition of our mother countries.

We have allowed all forms of Insurance Companies to form and flourish at our expense. Such as Fraternal Order of Eagles, Loyal Order of Moose, Fraternal Order of Orioles, American Order of Foresters, Order of Red Men, Maccabees, etc. Now you see the Lumber Mills, Cotton plants, Apartment Stores, Mines, Steamships and Railroads, all with their "Company Doctor." All these men are very poorly paid for the amount of work they do. For example, many good surgeons are doing a vast amount of work for a great Railroad Corporation, the only compensation being in many instances an annual pass which they never use.

Now is the time for us to inaugurate a restless movement and not wait until the high percentage of families get under the cloak of contract practice on insurance as in Austria, Germany and Roumania.

That we may prevent this state of affairs, let us all work for a solid united medical profession, that we may say to industrial organizations, you shall not reduce the salaries of your laborers, for the purpose of insuring them against medical fees, at the expense of the medical profession.

Fee Splitting.

Granting for the sake of argument that everyone present has been guilty of this offence; there is not one that will rise and say that it is right.

Buying cases is worse in some ways than advertising in the daily press, because the public has no way of protecting itself against

this form of graft. It also leads to indiscriminate, reckless and useless operating; and in these days, when the tendency in this direction is already too great, it is unfortunate to say the least.

From time immemorial it has been recognized that the only decent and honorable course for the doctor to pursue is to let his work speak for itself.

We should not discourage or hamper individual ability along different lines of work. In every community there are men who are noted for certain things. One is particularly skilled in Brain Surgery, another in Stomach or Gall-bladder work, and another in the Surgery of the Appendix, etc. The family physician is supposed to find out who these men are, and his duty is to take his patient to the man most skilled along the line of his diagnosis.

If we wish to retain the confidence and esteem of the public; we should not enter into any machine that we cannot openly lay before the patient and his friends. The tendency is already too great to distrust the action and motives of doctors, and we should do all in our power to combat it, rather than encourage it.

Fees.

Once out in actual work the practitioner of medicine, more than any other wage-earner, is up against hard factors that make for low, slow and no pay. The professional, sociologic and legal demands on the profession are increasing without regard for the material welfare of its members. Public opinion has decreed every where that it is a physician's duty to save life, to cure and prevent disease; but has nowhere decreed that he must save his own life, and look after the financial and material welfare of his family.

I congratulate the Scientific side of medicine as she climbs high the rugged mountain range of science with her experimenters, her inventors, her research workers and clinicians. But to her sister Financial medicine, we must turn and look upon in derision and disgust. There she lies dormant through a period of 80 or 100 years, in this most enlightened age of ours, without any advancement.

I was told only a short time back by a re-

sponsible veteran of medicine, that to his knowledge alone, fees had not changed in 60 years, and was positive they had not for many years before his time. Here we are working for the same fees that our grandfathers received. Cost of living has advanced 33 per cent during the last 10 years. Education has advanced, everything has advanced but fees; why not they? How can we hope to maintain a high standard of medicine unless we are paid well for our services?

Some of our fellow practitioners seem to think, that we are a noble and generous profession, existing for the good of mankind and that we endanger our reputation for nobility of character and generosity of action by insisting on higher fees and salaries than are offered. But this is not true. The members of the medical profession have to live like other folks and while they never fail to respond to the call of charity, they are not only justified in rejecting, but as good citizens bound to repel, fees which are contrary to sound economic principles.

Laying aside all sentiment concerning the practice of medicine that has been handed down from the past when physicians made no charge, but accepted only the honor awarded them and the profession; the fact remains that the physician, like the business man, must keep his income equal to or above his expenditures in order to maintain his credit. The business man from whom he buys, expects to be paid; so why should not the physician also expect to be paid for his service?

Tradesmen are promptly paid the entire amount of their bills. The doctor would be, too, if he would only put up a little fight for it; but, most of them, without a particle of business insistence, with childlike timidity, humbly submit without protest, to being paid at any odd time, in a haphazard way, at long intervals, and then, usually, only a small part of their bills, instead of the whole of them. The fees are not only too small in the United States, but the average physician has done well when he has collected two-thirds or three-fourths of what he has made. Name another profession or business that gives away one-third or one-fourth of what they work for. Statistics show that twenty-five per cent of

the population of the United States receive free medical service in some form, while only one-half to one per cent of the population are the recipients of other forms of charity; in other words, the charitable burden imposed on the medical profession is fifty times greater than that imposed on any other call of society. Not that all this loss is on paupers, but ninety per cent of it, is on people that could pay and won't. These people, that could pay and won't are the ones for whom the BUSINESS LEAGUE is intended, and not for the honest man or charity.

There is no reason why the fees of a physician should be rigidly fixed with no reference to the value of his service. There should be a wide range of charges for medical services, depending on several factors; such as thoroughness, efficiency, skill, time employed on an individual case, the danger of the physician, his family and his practice. The proper examination of a patient has come to be a problem involving time, wide knowledge, chemical and microscopic analysis and research, requiring more and more special training and skill.

I believe in a fee bill, but the people should be educated to the fact that the fee bill represents the minimum fee for ordinary service only, and when any special work is required a fee in accordance with it would be expected.

The price of a visit does not necessarily pay for service rendered. When the physicians try to collect something for extra services they are confronted in most cases with a settled price of a visit. By no means does such a procedure compensate the physician under all circumstances. A rich man will have his life saved for \$2.00 and pay a lawyer \$100,000 to have his business. The lawyer charges for special services according to their value, he no longer charges so much a visit or consultation.

While attending contagious diseases, physicians endanger themselves, their families and their practice. They should be compensated for the risk and the practice lost while with such cases, by a reward three times that received in ordinary cases.

Collecting Accounts.

Physicians should endeavor to collect from

all who are able to pay, even invoking the aid of the law when necessary; but always remembering to take care of those who are unable to pay. If a physician collects ninety per cent of his accounts each year, it not only enables him to meet his bills and keep his family comfortable, but it enables him to buy books, journals, instruments and other accessories, that make it possible to render a higher grade service to his patients. It is better to do less practice at a proper remuneration than twice the work at half pay. The income will be the same and there will be more time for reading, post-graduate work and recreation.

The regular collection of accounts has several good effects on a doctor's patients; it teaches them that he expects to be paid for his services, it prevents the bills from becoming so large that they are unable to pay them. it weeds out bad payers early, and it avoids many losses due to removals and deaths.

Here I wish to state that, there is no better way for us to regain the friendship of our enemies, or command the respect and esteem of the public, than to bind ourselves together in a well-organized society, showing mutual respects for one another's interest. Physicians have been fighting among themselves too long, the public has been watching their selfishness through centuries, until now it is using this attitude of jealousy to belittle and discredit our profession.

It is the lack of systematic financial training of the undergraduate, the over-increasing socialization of medicine, contract practice and the fear of losing practice, friends and prestige that has dwarfed the business side of medicine. It is only through united effort of the profession that protection against the dishonest patient will be secured. Look at Chicago with her four year old Business Bureau, collected over \$22,000 on what seemed to be uncollectable accounts the first year. Philadelphia with her Bureau organized in 1909, has reaped a richer harvest. Now leaving the northern cities and coming to our own State, we learn from our fellow practitioners of Lauderdale County, where they have a BUSINESS LEAGUE running under the name of BLACK LIST, that they have

actually collected bills five, ten and fifteen years old, that would never have been paid any other way.

This BUSINESS LEAGUE proposition has been tried by the Scientific research workers of the financial side of medicine and found to be a specific remedy for the malady of DELINQUENT BILL PAYING. I do not believe in a business league for the purpose of collecting past bills only, but to prevent a certain class of undesirables from robbing us as well as future physicians.

I think it high time for some State to become a nucleus in the advancement of the business as well as the scientific side of medicine. And I would like to see that state, Tennessee. My plea is for the early organization of a Business League in each large city and every county seat of the State.

It is not right for us to have no protection against dishonest people. The bankers, merchants, farmers, stockmen, realty companies, etc., all make them pay in advance or retain a lien for their money. The medical profession does not and loses.

The above named industries did not use to demand payment in advance or retain liens, when everyone was honest, but they have learned that most people have become dishonest, therefore they have had to organize against dishonesty. And have caused such work as Dunn and Bradstreet to be gotten up for their protection.

I wish to detail in a few words, a BUSINESS LEAGUE SYSTEM that would be to the medical world what Dunn and Bradstreet are to the mercantile world, it would not only reach and benefit every doctor in Dyer County or Tennessee, but would reach and benefit every doctor in the United States.

Have each doctor make out a list of the delinquent bill payers in his practice. Turn this list over to the Secretary of the County Society. Who is in turn to notify everyone in the County that has been listed, by registered letter. He is then to compile the various names listed in alphabetical order and have a small vest pocket book made containing same, together with a few fly-leaves for additional names. Each physician turning in these names should go under a number, which

number should be registered in the office of the Secretary to be kept under lock; and which number also should be placed before the name of each patient listed by him. This book is to be revised in December of each year and one book is to be the property of every physician that is in good standing with his County and State Society; on the payment of \$5.00. This is to be divided as follows: 50 cents for the County, \$1.50 for the State and \$3.00 for the American Medical Association. Each County Secretary is to furnish the State Secretary with a revised edition on the first of each January. The State Secretary is then to arrange the various Counties in alphabetical order, list each County separately, into a State Edition, which is to be revised yearly. This State Edition is to accompany the March number of the State Journal to every physician in the State that has good standing in his County and State Society. This revised State Edition is to be sent at once by the State Secretary to the American Medical Association; which is to compile a complete work of the entire United States, listing each State separately, just as the American Medical Record. This work is to be revised yearly, and sent out with the first number of the Journal in July, to every member of the American Medical Association. For a man once listed to get in good standing with the Association, he must make satisfactory arrangement for the payment of his past accounts, that are still under statute limitation, by cash, secured note or mortgage and convert himself into an honest gentleman.

The doctors of the Association must help, aid and assist this "professional dead-beat" get back to the high plain of an honest man. They can do this by refusing to attend him or his family. They can be stimulated to the point of refusal by having their license revoked if they fail to do so.

You see what this would bring about, when the layman learned that he would have to leave the United States in order to get medical attention, if he failed to pay his bills, he would pay them as if they were taxes. Then when we would do \$50 worth of practice, we could collect it, instead of one-third or one-half that amount.

A system like this, would not only be a means of collecting our just debts, but it would get ninety per cent of all medical men into a Medical Society. When you could show and prove to them that it would mean from twenty-five to fifty per cent gain on the amount collected by them, under the old system, they would join it; for we have but few men in this world that are willing to work for nothing.

Conclusion.

I will say, let us have a high standard of Medical Universities, that we have better physicians. Stop fee-splitting before we lose the respect and confidence of the public; raise our prices in proportion to the advanced cost of living and medical attainments and let us all strive, without ceasing, until we have secured a better system of collecting our just rewards.

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DISCUSSION.

DR. SCOTT FARMER, Cookeville: It is an easy matter to get patients, but it is entirely a different proposition to get paid for our work. I wish to say that, while I received my diploma twenty-three years ago, it has only been within the last four years that I have confined myself exclusively to the practice of medicine, and being young in the cause, I do not feel able to discuss the doctor's paper as I should. As I have said,

twenty-three years ago when I received my diploma, I remember very well when I was riding upon the Tennessee Central and had a pair of obstetrical forceps under my arm and exhibited them to the passengers. When I got home I flattered myself I was going to make a great deal of money out of the practice of medicine. When I got home my father took me aside and gave me the only wrong advice he ever gave me in his life. He said to me, "Scott, I want to tell you you cannot make a living in this country practicing medicine." I replied, "What! A young man with a diploma and a pair of obstetrical forceps under his arm cannot make a living in this country?" (Laughter.) Said he, "No." He began to tell about the prices that were paid for obstetrical cases. He said the average was \$5.00 for attending each case, it made no difference whether one stayed with the patient half an hour or for a day or for a week. (Laughter.) And in some instances where the cash was given it was \$3.50. Those were the prices paid in my section of the country when I began to practice medicine, and it has remained so until the last few years. He impressed upon me the fact that a doctor could not make a living unless he raised his corn and potatoes and hay and fodder and everything of that kind himself, and he had to have a farm. That was good advice in a way. I went along that way for nearly twenty years. I tried to do two things at once. I was not only a farmer by name, but by occupation, and while I made a little money in hogs and in young mules, my patients suffered. Four years ago I turned my farm loose and made up my mind that I would either do one thing or the other, that I would either be a farmer or confine my attention to the practice of medicine exclusively, and so I have thrown my whole soul, mind and body into the work since that time. I decided to try and practice medicine in a scientific way. Since that time I have had less trouble. I am getting reasonably good fees for my work, and we have succeeded in raising the prices all over the county without any detriment to the laity.

There is one thing I want to impress upon the younger members of the profession, and that is the advice given by the late Reverend T. DeWitt Talmage in a lecture he delivered years ago. He said at that time, "Do one thing, and do it better than anything else." If we will do that, and if we will conduct ourselves right and will be economical and spend less than we make, any man in the profession could make a success. (Applause.)

DR. YARBROUGH, Covington: This is a very important question, and the paper presented by Dr. Flanary is very timely. Self-preservation is the first law of nature. We inherit that. When we get to be a little larger and go to the Sunday school we are taught self-denial, but it seems

that doctors, as a class, above all others, the minister not excepted, deny themselves the most. Going back to self-preservation as the first law of nature, as Dr. Flanary has told us, we have to practice medicine for a living, and in order to do that we must collect our bills. We must be compensated for our work, or we must do something else. I am not the best collector in our county. We have one physician there who collects ninety per cent of his bills. At one time Tipton County had the banner county medical society in this State. In fact, we had the largest percentage of members of any county medical society belonging to the Tennessee State Medical Association. During the year I was President of the County Medical Society and Dr. Dixon was Secretary, we held regular meetings monthly, and we established during that time a fee bill. Before that time the old physician would say to us younger practitioners that now and then they were sick, that they were not feeling well, and could not go to see certain patients, and consequently they would get one of us younger men to go. We charged the same for going to see a patient at night as we did during the day time. I remember one case very well that an old doctor could not see himself and he sent for me. I was a young man. There was good pay in that case. One night a man called me up and said, "Doctor, I want you to come down here right away and see my brother, as he is very ill." I raised my bedroom window, and as I had been out two or three nights before seeing other cases, I did not feel inclined to go. This man said he had tried every doctor in town, and that there was not one of them that would go. I said to him, "You can go to the devil, and I will not go anyhow." The next morning my father said to me, "Son, didn't some one call you last night?" I replied, "Yes, sir." "Did you go?" I said, "No." He replied that it was rather hard, and that a young practitioner should not be so independent. I have learned that this particular man did not pay his doctors' bills. I said to my father that I do not mind doing a charity practice, but I refuse to attend deadbeats. The first thing I did was to commence charging more for night calls. Necessity was the mother of invention with me. I told the patients that it would cost them \$3 for me to go out to see a member of the family at night. It was not long before I began to get the other doctors to come up to getting that schedule of fees. We have a fee bill established. We went over into a neighboring county and did some missionary work.

Since we have been doing missionary work in this progressive age, they have gone us one better, and they have the best method I know of so far as collecting accounts is concerned. Recently we have adopted a plan similar to the one the doctor has outlined. Each doctor in our county is furnished a list of the deadbeats; but we all

do charity practice. The deadbeat will go from one doctor to another until he has gone the rounds. He will deadbeat every doctor if he can. When a man is able to pay and will not pay, we should refuse to attend him when he is sick.

Every man gives a mortgage on his property to be furnished by a merchant or bank, and we require such a man to secure us in paying his bills for medical services rendered. We ask him to pay once a year. This plan is working fairly well so far. We have employed a stenographer, and also a competent person to make out these letters. I think the plan outlined here of getting the patients to pay is a large proposition. It will be like a Census Bureau, I am afraid we cannot manage it. Each county can adopt some plan of that kind without imposing on the poor people, and without any withdrawal of philanthropy or anything of that kind. I would like to hear any method by which we can go ahead and protect ourselves and make a good living by getting compensation from people who are able to pay. I do not believe in rendering medical service to anybody for nothing, provided they are able to pay.

I would like Dr. Sanford to explain the plan they have adopted in his town. The State Association depends upon the county association, and it is a problem as to the best method of getting men to join the county society. If you will give a barbecue or any oyster supper, you will get a majority of the doctors in the county out, and then you can discuss all these questions, regulate the fee bill, and arrange all these things nicely.

DR. J. W. SANFORD, Ripley: I have been attending this Association for many, many years, yet this is the first time this proposition has been brought before us. We in Tennessee, as a medical profession, are supposed to be living in the light of the twentieth century, but we are really living in the seventeenth. Back in the seventeenth century you could not beat business into the heads of doctors. As soon as prices began to go up we got busy in West Tennessee and established a minimum fee bill. We established a delinquent list. Each doctor had a number, and each man was allowed to put a certain number of non-paying people on it. If it was found that the number on these were charity patients, that fact was reported to the county society, and the doctor was required to take off any party that could afford to pay. We stuck together in this movement. We had a few sore-heads in our county. We wanted to get a little glory. They would not join the society, but we fixed them. The first time they got into trouble, they did not get any help from us. The next time they got into trouble they had to join the county society and become members. We did not force them to do it. We have got one or two men in our county who are not members, but they are men who

do not have much practice. People will not employ them. We try to live and let live, and if every county would do that the doctor would not be so poorly paid. The country doctor can take a patient to a surgeon, after having worked on him maybe for three or four years, yet the surgeon in one fell swoop gets the whole estate. (Applause.) There is no division of fees there. (Laughter.) I am not asking for any. All I ask for, in the name of God, is let the poor country doctor get a living, and I am going to get it.

DR. E. C. FREEMAN (Pulaski): I did not intend to take part in this discussion, but after hearing Dr. Sanford, I am prompted to say a word or two in regard to collecting fees. He said there were two doctors in his county that do not belong to the county society, and that they did not get much practice. It shows to us that the man who is collecting his fees is the man that the majority of the people want.

I am from Giles County. We have a good society, but the doctors, as Dr. Sanford said, are living in the seventeenth century. They are not collecting their fees. I have been in the practice of medicine ten years, and I have the name of being the best collector in Giles County, although I do not collect all of my bills. A great many people refuse to pay me. I reckon I have five or six thousand dollars on my books I have failed to collect. A great many people are able to pay and will pay; others can pay and will not. Let me mention one instance. A man who lives five miles from Pulaski bought a farm and paid \$6,000.00 cash for it and bequeathed it to his wife and children. He had several cases of typhoid fever in his family. He had a trained nurse; he paid her cash every day for her services while she was there. The children all recovered. He would not pay me my bill. I sued him and got judgment, but his farm was made over to his wife and children, so that I could not get a nickel.

What we need as a medical profession in this State is to get behind the Legislature and have a law passed which will give us a right to collect our fees. I venture to say that there are not many doctors before me who have not lied every year to the tax assessor as to the amount of money in fees on their books. Some say about \$15.00, and others say about \$100.00, when in reality you may have to pay taxes on \$6,000.00.

The Legislature passed a law that if you refuse to give notice of accounts due you, you cannot collect them by law if you have a chance.

I have enjoyed the paper very much, and I think we should take home with us this lesson and study it and join together to work for each other's interest and not try to hinder any medical man that drives out in the cold for the purpose of relieving suffering humanity. We should not hesitate to go to see poor widows and people who are crippled and not able to pay us fees. On the other hand, for the professional deadbeat we should refuse to do his practice from time to time.

In Giles County we have a good many doctors, and of course the laity soon finds out how to work them. For instance, one deadbeat will patronize me this year and next year he will go to Doctor So-and-So, and the following year he may move off to another county, and he does not pay any of us. We must commence to think of formulating a plan to collect our fees, and the way to do

this is to work with each other and not scatter our forces. We have got to have a union of ideas to collect our fees.

DR. C. C. SULLIVAN, Nashville: There is one thing I think we should take notice of in our cities, as well as the fee business abroad, and that is this: We have physicians in Nashville, as well as in other cities, who, after they get a good practice built up and are getting along very well, often go to see a patient several times more than the patient really requires, and when they come to settle they settle for a certain number of visits. They go to see the patient a certain number of times and do not charge a fee for each visit. That makes it hard for the young practitioner. Such men do the same thing over and over, and I know there are some good physicians, the best we have, who make such calls, and after the case has been dismissed no other practitioner could get a second call at that house unless he did that kind of work. The people will say that Dr. So-and-So called to see his patient twenty times and they never had to pay him for more than fifteen visits, when ten visits was all that was really required. Gentlemen, this is not right.

Another thing: If a general practitioner, when called to see his patient, and diagnose his case, and tell the patient he is going to give him medicine, he should let him know the effect that medicine is supposed to have, what it is expected to do, whether the case is a serious or light one, and give the family some assurance that you know something about the patient, and in this way you will get practice. On the other hand, if you prescribe and do not know what you are going to give, and say nothing to the members of the family, some people will think you know it all, while others will think you know nothing, and will have you sized up about right. It is nothing but right to the patient, if a doctor does not understand a case thoroughly within a reasonable time, he should tell the patient or members of the family that he wants consultation. If they should suggest some one whom you feel does not know anything about medicine, you should suggest that you want Doctor So-and-So, and not let the patient get anybody that he wants in consultation unless it is some one that knows something about medicine, according to your idea.

DR. BANKS, Springfield: In the slangy vernacular of the late lamented Sam Jones, I wish to voice a reverend amen to every word that has been uttered by the doctors here in connection with this paper.

DR. FLANARY (Closing): As time is now very much limited, I will not try to answer the different discussions. But will say there is another point I would have liked to have taken up in paper, namely: Medical Economics in Our Universities and Colleges. This is being sadly neglected. We enlist young men from various sections of the country into our universities, educate them along scientific lines of medicine and surgery, but we do not tell them how to keep books, case records, and collect accounts. These points are of vast importance to the success of any man.

We should have a man appointed to the Chair of Medical Economics who should be well versed in its various lines, and who should devote his entire time to the study and teaching of the business side of medicine.

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Devoted to the Interests of the Medical Profession of Tennessee

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EDITORIALS**A VICIOUS ATTACK.**

In the May issue of the California State Journal of Medicine, the following vicious editorial appeared:

THE AMERICAN ROYAL COLLEGE OF SURGEONS.—J. B. M.

In this fair month of May, in the good city of Washington, is to be held a most remarkable meeting for the purpose of conferring upon American surgeons (query: who—or what—is a surgeon?—a collection of letters indicative of some title, both title and string of letters being subjects for discussion. Martin (of Surgery, Gynecology and Obstetrics) and Murphy (of Murphy's Clinics)—or should it be Murphy and Martin?—started the game and have skilfully encouraged the ambition to belong to something and decorate one's name with letters. How are the honored ones to be chosen? From the subscription lists of Murphy Clinics and Surgery, Gynecology and Obstetrics? Or shall the applicant merely have to attend and register at one of these huge surgical Martin-Murphy clinics? Or must the applicant have a real case of murphitis before he can be considered as a proper one to bear the mystic letters? May we suggest a few titles for this personally-conducted eruption into medical education? How would the "American Surgical Society" do? This could be used for the terminal-letter part quite nicely: "A. S. S., J. B. M." Or this one has been suggested: "American Royal Surgical Emporium, joined by me in 1913," which would string out behind one's name quite nicely. Think of the ponderous psychological effect it will have upon one's patients to have one's cards and stationery printed with a whole lot of extra letters after his name. And we'll bet a suit of clothes to a tin-type of Murphy, that a lot of people will take this quite seriously!

The above expression neither does justice to the capable editor of the California Jour-

nal, nor to the men, Drs. Murphy and Martin, whom he attacks.

It is of course impossible for us to say in whose mind the idea of establishing a College of Surgeons originated, but this is the first intimation which we have had that it originated with either Dr. Martin or Dr. Murphy. It is exceedingly unbecoming for the Journal to refer to Dr. Murphy as Murphy of Murphy's Clinics, or Dr. Martin as Martin of Surgery Gynecology and Obstetrics. It is quite obvious that these gentlemen need no defense from such slander, for they made Murphy's Clinics and Surgery, Gynecology and Obstetrics and the publications are merely reflections of their greatness.

On the first page of the California Journal there appears a conspicuous half-page advertisement of "Murphy's Famous Clinics." It would seem that there is not the most perfect harmony existing between the editorial and the business offices. Or must it be inferred that the editor deliberately sells one portion of his publication to advance the interests of a man for whom editorially he expresses nothing but contempt? Consistency? Square dealing?

As we have taken occasion to state, heretofore, we are convinced that some method should be devised to safeguard the practice of surgery in this country. We are not sufficiently informed as to the details of the plan recently promulgated by the Congress of American Physicians and Surgeons to give it unqualified endorsement. But it would take something more than denunciation and ridicule to convince us that a movement officered and directed by such men as Finney, Chapman, Matas, Martin, Ochsner, Murphy, (Phila.), Brewer, Mayo, Sherman, Crile, and Haggard was inaugurated for sinister ends and should be condemned without investigation.

VANDERBILT MEDICAL COLLEGE.

The announcement has just been made through Chancellor Kirkland of a million dollar donation to the Medical Department of Vanderbilt University, by Andrew Carnegie. This gift, the first of large proportion to a purely medical college in the South, we trust

will be the beginning of still further munificent donations to our Southern Medical Schools. Our colleges have been laboring under frightful handicaps from a financial standpoint.

Our fair Southland had hardly recovered from the ravages of the war before medical colleges began to spring up and all of them, without exception, were for the most part compelled to exist upon the income from students. Proprietary Medical Colleges, or those owned by the faculty, soon saw the futility of such a course and after the excellent work of the Carnegie foundation and the Council on Medical Education, gradually dropped out or by process of amalgamation were materially reduced in numbers until the profession and the people are now beginning to realize the necessity for a high class Medical University. We trust that this endowment of Vanderbilt's Medical Department will enable it to take its proper rank as one of America's foremost Medical colleges.

Shortly after the civil war, Nashville was the South's Medical center, the contest for supremacy in this line has been keen between Louisville, Nashville, Memphis and New Orleans.

The endowment of Tulane University has given them an enormous advantage in recent years, but Nashville bids fair to regain her lost laurels through this gift to Vanderbilt.

With a plant already valued at \$325,000, the additional million, eight hundred thousand of which is to be used as an endowment, should give to Vanderbilt the means by which she may rightfully rank in class A plus.

The trustees of this fund is to be limited to seven members, three of whom must be scientific investigators, which at once insures the proper expenditure of the income from this generous gift.

The day has passed when a doctor is fully equipped to practice medicine with a pair of saddle bags, a pocket case and a pair of obstetric forceps. The public have at last been educated to know that curative medicine is much the minor part of medical science and they are beginning to offer their assistance and encouragement to the development of preventive medicine which can only reach

perfection through the agency of well equipped laboratories.

The benefits of this gift will enable Vanderbilt to build, equip and maintain laboratories where scientific investigators may spend their full time wrestling with the problems of preventive medicine and their efforts when successful, will be felt throughout the length and breadth of our land. These laboratories are indispensable to progress in our hospitals, for the hospital is dependent upon the laboratory for the scientific basis of its work and it is a fortunate coincidence that on the same campus, the new Galloway Memorial Hospital shall be linked to the new Vanderbilt Laboratories.

We congratulate the University and wish them God speed.

A GOOD IDEA.

The commendable idea of encouraging school children, particularly those graduating from the grammar and high schools, to write their theses upon some topic connected with hygiene or sanitation, such as Drs. Scott Farmer, of Cookeville, and Olin West, of Nashville, begun by offering a prize of \$10 to the best essay, at the recent graduating exercises of the Cookeville High School, strikes the writer as being one of the best ideas advanced along this line. In order to write a capable thesis upon these subjects, it is first necessary to familiarize themselves with the general rules of hygiene and sanitation, and if the boys and girls just leaving school can be, in this way, encouraged to get the proper grasp of these important branches of knowledge, then truly much has been accomplished. Let us hope that other doctors throughout the State may offer similar prizes and that the encouragement towards the selection of these useful subjects may become so popular as to eventually be made a requirement.

At the last meeting of the State Society, during a discussion before the House of Delegates, relative to the lack of interest which had been shown by the Board of Trustees, Councilors, and other officers, I took occasion to express my opinions relative to persons re-

maining in office who demonstrated their unfitness by lack of interest and suggested that where this was known to be a fact, the officer, no matter who he was, should resign and someone else be elected in his stead. In the heat of the debate I acted without due reflection in singling out our former efficient Secretary, Dr. Geo. H. Price, forgetting at the time that Dr. Price had devoted fully twenty years of hard service to this organization, making many personal sacrifices therefor, and should have been treated with more courtesy by myself. My words of censure at that time were especially ill-advised from the fact that Doctor Price was not present to defend himself. The publication of my remarks in the May issue of the Journal as a part of the transactions of the House of Delegates, was a further error upon my part and I take this means of publicly expressing to the members of this Association my regrets, and of offering this apology to Dr. Price, who rightly feels aggrieved at my indiscretion.

PERRY BROMBERG.

News Notes and Comment

Dr. and Mrs. E. C. Ellett, of Memphis, will leave for Europe early in July. They expect to be gone about two months.

Drs. Ellett, Haase, Manry and McKimney, of Memphis, attended the American Congress of Surgeons at Washington in the early part of May.

Drs. W. B. Rogers, Battle Malone, and B. N. Dunavant, of Memphis, Tenn., announce the removal of their offices to 1701-1703 Exchange Building, Memphis, Tenn.

We regret to learn of the death of Mrs. David Dulaney, mother of Dr. O. Dulaney, of Dyersburg, and Dr. R. A. Dulaney, of Jonesboro. We extend our heartfelt sympathy to them in this bereavement.

We are pleased to see from the press that our esteemed Treasurer, Dr. W. C. Bilbro, of Murfreesboro, has accepted the Chair of Materia Medica and Therapeutics in the new

Medical Department of the University of the South which is soon to be opened at Nashville.

At a recent meeting of the Board of Trustees of the University of Tennessee at Knoxville, the following appointments for the Medical Department of the University located at Memphis were ratified: Dr. M. W. Schmidt, instructor in histology; Dr. Morgan McFarland, instructor in physiology; Dr. Fletcher, instructor in chemistry.

The Commencement exercises of the Medical Department of Vanderbilt University were held at West Campus, May 22. The charge to the graduates was delivered by Professor S. S. Crockett, and the address of the evening by Rev. Ira Landrith. Degrees were conferred upon seventy-two graduates in this department by Chancellor J. H. Kirkland.

At the recent closing exercises of the Cookeville High School, two prizes of \$10 each were awarded by Drs. W. S. Farmer, of Cookeville, and Olin West, of Nashville, for the best essays on Problems of Health and Sanitation. This is a wise move in the right direction and we would be glad to learn of similar encouragement being offered in other high schools throughout the State.

At the recent meeting of the Middle Tennessee Medical Association held at Dickson May 16 and 17, Dr. T. J. Coble, of Shelbyville, was elected President; Dr. G. E. Hatcher, of Nashville, Vice-President; Dr. R. W. Billington, of Nashville, re-elected Secretary-Treasurer. Columbia was selected as the next place of meeting, which will occur on the third Thursday in November.

We are indeed pleased to see that the State Health Office is making an active effort towards educating the people by timely and well worded articles in the public press and by personal visits and addresses to the citizens in the smaller cities. Dr. Lucius P. Brown and Dr. H. H. Shoulders have recently been doing some very valuable work along this line and we take pleasure in commending them and endorsing their efforts.

The residence of Dr. J. R. Tarpley, seven miles from Nashville, on the Gallatin Road, was completely destroyed by fire. The loss is estimated between \$3,000 and \$4,000.

Dr. P. K. Lewis, of Doyle, has moved to Ravenscroft, where he succeeds Dr. W. J. Breeding, the latter having moved back to his former home at Sparta, and is doing an extensive practice in addition to operating a fine farm.

At the recent meeting of the Army and Navy Surgeons of the Confederacy, held at Chattanooga during the Confederate reunion, the following officers were elected: President, A. A. Lyon, M.D., Nashville, Tenn.; First Vice-President, G. M. Burditt, M.D., Lenior City, Tenn.; Second Vice-President, J. A. Hall, M.D., Auguilla, Miss.; Third Vice-President, E. L. Beadrick, M.D., Johnson City, Tenn.; Fourth Vice-President, Carroll Kendrick, M.D., Kendrick, Miss.; Secretary-Treasurer, Stephen A. Ragan, M.D., Kansas City, Mo.

Dr. A. B. DeLoach, of Memphis, has been appointed by Governor Hooper as a member of the State Board of Medical Examiners to succeed himself. Dr. DeLoach has the endorsement of the entire profession of the State and has been an active member of the Board. We commend him for his past efforts relative to the punishment of quacks and illegal practitioners and trust that he may be successful in securing a more active campaign against these disreputables by the other members of the Board.

The Sixty-Second Annual Commencement of the University of Tennessee, Medical Department, was held at the Goodwyn Institute at Memphis, on May 15. The address to the graduates was delivered by Dr. C. J. Washington. The degrees were conferred by the President, Dr. Brown Ayres; the honor certificates were presented by Dr. E. C. Ellett, former dean of the Medical Department. There were thirty-four graduates from the Medical Department, thirteen from the Dental Department and five from the Pharmaceutical Department. The exercises mark the closing of

one of the most successful years in the history of the University.

DEATHS.

Dr. Wm. Green of 316 Fatherland Street, Nashville, died at a local infirmary in Nashville, May 25, after a sudden illness. Dr. Green was eighty years of age and though he never practiced medicine, was a graduate of the Medical Department of the University of Michigan.

County Society Proceedings

DAVIDSON COUNTY.

April 1, 1913. Nashville Academy of Medicine. Meeting was called to order by President Fort 8:20 p.m. President announced that the first Tuesday in April being the time designated in the Constitution for the election of officers for the ensuing year, he would entertain nominations for President. Dr. George Price, in a graceful speech, placed the name of Dr. Olin West in nomination for the Presidency. It was moved, seconded and carried that nominations be closed and the Secretary cast the unanimous vote of the Academy for Dr. West, which was done. Dr. West then called for nominations for Vice-President. Dr. Deering J. Roberts placed the name of Dr. Duncan Eve, Jr., in nomination for Vice-President. A motion then carried instructing the Secretary to cast the unanimous vote of the Academy for the nominee, which was done. Upon call for nominations for Secretary, Dr. C. F. Anderson nominated Dr. J. F. Gallagher. It was moved, seconded and carried that the Secretary cast the unanimous vote of the Academy for the nominee, which was done.

Dr. Cowden moved the election of delegates to the Tennessee State Medical Association, which delegates together with their alternates were to hold office for a period of two years. Dr. A. B. Cooke (seconded by Dr. Witt) nominated Dr. H. M. Tigert, Dr. Robt. Caldwell and Dr. W. M. McCabe as the three delegates Davidson County was entitled to. Dr. C. F. Anderson moved the Secretary be instructed to cast the entire vote of the Acad-

emy for the nominees. This was seconded and carried; the Secretary complying. Dr. Cooke then nominated Drs. O. N. Bryan, D. R. Pickens and R. W. Billington as alternates respectively to Drs. Tigert, Caldwell and McCabe. Dr. Price moved that nominations be closed and Secretary be instructed to cast the unanimous vote of the Academy for the nominees. This was seconded and carried and the Secretary cast the vote as instructed. Dr. Savage (seconded by Dr. Crockett) placed the name of Dr. W. A. Bryan in nomination for Censor. Dr. Crockett moved the nominations be closed and the Secretary be instructed to cast the vote of the Academy for Dr. Bryan. Carried, and the vote was cast.

Dr. Fort stated that his address as retiring President would be delivered at a future time and introduced Dr. Frances Hagner, of Washington, D. C., who delivered an address on "Neoplasms of the Bladder." Dr. Perry Bromberg discussed Dr. Hagner's paper, stressing in particular that all tumors of the bladder should be regarded as malignant; that the Oudin current is a simple and often efficacious method of treating bladder tumors, and that in operative treatment he preferred the extra-peritoneal approach to the bladder. Dr. Haggard also discussed the paper, mentioning malignant growths at the base of the bladder. Dr. Hagner in closing discussed the Oudin current further, and the total extirpation of the bladder as a possible operation.

Dr. Price raised the point that the Committee of Arrangements appointed by the President of the State Association which was at work perfecting arrangements for the coming meeting of the State Society was illegal, in that the President of said Association was acting without authority. Dr. Roberts explained that this occurred, probably, through the change in the Constitution of the State Society. Dr. Barr moved (seconded by Dr. Crockett) that the committee appointed by the President of the State Society be made the Committee of the Academy. Passed.

Dr. Anderson stated that Dr. Cowden had personally paid a deficit of \$34.50, incurred in a recent subscription entertainment of the Academy. Dr. Barr moved that the Secretary be instructed to pay Dr. Cowden this amount. Carried.

Dr. Bromberg Moved that the delegates to the State Association be instructed to vote for the change of the fiscal year of County Societies to correspond to the calendar year. Carried. Adjourned.

April 8, 1913. No meeting of the Academy was held on account of the Tennessee State Medical Association being in session in Nashville.

April 15, 1913. Meeting was called to order by President West at 8:15 p.m., the following being present: Drs. Savage, Tigert, Hill, Mitchell, R. Caldwell, Oughterson, L. Caldwell, Pollard, Williamson, Sayers Harbin, Sumpter, Goodwin, DeWitt, Cullom, Walsh, Cayce, Floyd, W. B. Anderson, Hargis. In the absence of the essayist, Dr. Billington, case reports were called for by the President.

Dr. Oughterson reported a case of a man who had been treated for six weeks for malaria, the aestivo-autumnal parasite said to have been found in his blood. Quinine had been given by the mouth and hypodermically without improvement. Leucocyte count showed 8,000 white cells. Four days later count was 25,000; four days after this last count there were 21,000 leucocytes. Witdal negative to straight typhoid and para-A and para-B types. Spinal puncture and feces negative. Physical examination negative. Temperature, 100 F. Pulse, 100. Asked for a diagnosis.

Apropos of Dr. Oughterson's case, Dr. R. Caldwell reported a case of double antrum of Highmore infection with few or no localizing symptoms.

Dr. Savage reported fourteen cases of detachment of the retina treated by injection of citrate of soda. Two of these cases were Dr. Price's and twelve his own. Of these fourteen cases, three have recovered, two unimproved, and the remaining nine have varying degrees of vision. Four additional cases of a confrere in St. Louis were also reported, two of which were unimproved and two "marvelously improved." Dr. Savage stated he believed Vail's theory of the cause of detachment of the retina to be the most tenable. This theory is that detached retina is caused by a lack of the normal watery secretion of

the glands of the ciliary, which lessens the amount in the posterior chamber and allows the retina to fall away from the choroid.

Dr. Cayce stated in the discussion of Dr. Savage's cases that he had discontinued all sub-conjunctival injections except cyanide of mercury. Dr. Cayce reported a case of persistent phlyctenular ulcer of the cornea treated with cyanide of mercury injections; also, a case of dense pannus treated in the same manner.

Dr. Cullom spoke of the possibility of phlyctenules being tubercular and the injection of guaiacol as a possible treatment. He stated he had seen good results from sodium citrate in relief of increased intra-ocular tension.

Dr. Savage reported a case of Dr. Price's of sub-acute glaucoma in a blind eye rendered so by trauma sometime previous. Severe pain, retracted iris instead of advanced, marked increase of intra-ocular tension. Eserine and injection of citrate of soda were used. In ten minutes patient was free from pain. Two days later tension was normal.

Dr. Sayers reported a man of thirty suffering with torticollis who, two weeks after complained of pain at base of skull with maximum point of tenderness over mastoid. One week after this he suffered a similar but more severe attack. Gave history of two or more of these attacks every six months since he received an injury during the Spanish-American war. Temperature, 99.5 F. Asked if this is mastoiditis.

Dr. Cullom said he couldn't imagine mastoiditis extending over a period of ten years or without discharge from ear. Suggested neuritis.

Dr. Cayce suggested low grade of inflammation in mastoid with additus ad antrum closed with gas formation causing swelling.

Dr. Tigert suggested leucocyte count. Would advise exploration.

Dr. Lucian Caldwell reported a case of cervico-occipital neuralgia with slight elevation of temperature, and suggested that this might obtain in Dr. Sayer's case.

Dr. Hill reported a case of a man of 52 years, who fell six years ago, injuring kidney and hematuria resulting. He now has recur-

rent attacks of hematuria when he lifts anything heavy. Asked if this is stone.

Dr. Pollard discussed trauma to kidney and hematuria.

Dr. Mitchell said he did not understand how trauma could play a part in the case after such a long interval.

After a few remarks by the President outlining some of the plans of the Academy, adjournment was taken at 9:15 p.m.

April 22. The Academy met in regular session in the Tulane assembly room, being called to order promptly at 8 p.m. by President West. The following were among those present: Williamson, Pollard, Smith, J. Witherspoon, Fuqua, Shoulders, Sifford, Pickens, Morrissey, Hill, Harris, Goodwin, Glasgow, Sayers, Duncan Eve, Sr., Toy, Simmons, Billington, Tigert, Bromberg, Litterer, Caldwell, W. A. Bryan, Gaines, Dixon, O. N. Bryan, Dabney, C. F. Anderson, Savage, Mitchell, Edwards, Oliver, Harrington, Jones, Walsh, Floyd, Schell, R. Barr, Bloomstein, Overton, Hatcher, McCabe, and Grizzard.

The essay of the evening was a special address by Dr. A. B. Cooke on "Lane's Conception of Intestinal Stasis and Its Management."

Dr. Gaines opened the discussion, his remarks dealing largely with peri-colic bands and allied conditions. He believes that kinks often cause gangrenous appendix.

Dr. Eve, Sr., stated he heard Mr. Lane present his subject to the American Surgical Society in Philadelphia three years ago. The paper was received with consternation by the members, but it fell short. However, it was discussed with much deference to the prominence of the author.

Dr. Witt asked to what extent the operative treatment of constipation has been practiced by surgeons of large experience. It struck him that Lane draws conclusions not altogether justified. He begs the question when he assumes that ligaments form at sigmoid, etc., for protection when they do not occur elsewhere. Dr. Witt believes these ligaments congenital.

Dr. Tigert does not think operative treatment will become popular because means of diagnosis not at hand.

Dr. Bryan reported seeing in Guy's Hospital, London, in 1910, Lane short-circuiting the intestinal canal for chronic mastitis to prevent cancer. Also saw a patient with pulmonary tuberculosis in preparation for the same operation to prevent further development.

Dr. Cooke in closing said he did not pose as Lane's champion or as a particular expert in this line. He took exception to Dr. Gaines' remarks that the late results of Lane's operation being mal-nutrition. In answer to Dr. Witts' question as to the extent Lane's treatment of intestinal stasis was being used, Dr. Cooke mentioned Coffee, Mayos (though they were getting away from it), Murphy, Crile, and others, who are feeling their way along the line of Lane.

Dr. McCabe moved that the regular order of business be dispensed with and that the Academy go into the election of applications for membership which were in the hands of the Secretary. Seconded and carried.

Ballot was called for on Dr. E. S. McIlvain. twenty-five votes were cast, all in the affirmative, and Dr. McIlvain was declared elected. Dr. Chas. R. Sharp was also elected to membership, nineteen votes being cast, all in the affirmative. The ballot on Dr. A. L. Erwin resulted in twenty-four being cast, all in the affirmative, and he was declared elected.

Dr. Tigert spoke on the matter of reducing the fees of the Academy. Dr. Caldwell moved, seconded by Dr. Barr, that the dues of the Academy be reduced from \$7.00 to \$5.00. Dr. Cooke moved that action on this matter be postponed to the first regular meeting in May. Seconded and carried.

Dr. Tigert moved (seconded by Dr. Jones) that a committee be appointed to revise the Constitution and By-laws of the Academy and present same to the Academy for ratification. This was seconded and carried, and the Chair appointed Drs. Tigert, Cooke, Dixon and Gallagher.

Dr. McCabe (seconded by Dr. Jones) moved that the Board of Trustees of the Academy be requested to report the amount of money in their hands and how much has been spent. Carried.

Dr. Bromberg moved that the Davidson County Medical Society endorse the recom-

mendations of the Committee of the House of Delegates of the State Society in favor of Medical Defense for the members. Dr. Savage moved postponement of action on this matter to the first meeting night in May and that the Secretary notify the members. This was seconded and carried. Adjourned.

April 29, 1913. The Academy was called to order at 8:10 p.m., by President West. The minutes of the two previous meetings were read and approved. Those present were: Drs. Bromberg, Glasgow, Sharber, Overton, W. A. Bryan, Dake, Duncan Eve, Sr., Toy, Cowden, Savage, Witt, Morrissey, J. Witherspoon, O. N. Bryan, Hatcher L. Caldwell, Wilson, Harbin, Cayce, Fuqua, Campbell, Hill, Williamson, Weaver, Leonard, Walsh, Sharp, Sayers, Davis, W. B. Anderson, Oliver, Harris, McCabe, Dixon, Gaines, Litterer, Floyd, Hibbett, B. Tucker, R. A. Barr, Shoulders, and visitors.

Dr. P. L. Pitt, of Cheap Hill, Tenn., was elected to membership.

The essay of the evening was "The Treatment of Decompensating Heart," by Dr. W. A. Oughterson.

Dr. Witt in opening the discussion stressed the point that we should consider which side of the heart is failing. He believes that in a particular case one cannot say how great a part the internal secretions play in the break-down, though it is known that the internal secretions have influence on the heart. Diet should play a part in the treatment, especially in the cardio-nephritic type. In children we must not only save the heart from excessive physical strain, but we must prevent a reinfection from the focal point, causing the valvular damage. A change of climate or the removal of tonsils may prevent this reinfection. As to the treatment, rest in bed with ordinary care, withholding digitalis, may be all that is necessary. With this a low diet and mental and physical rest are of great value. It may be necessary for the patient to change his mode of life, which may involve his means of livelihood.

Dr. Walsh asked that in a case of arteriosclerosis would not straphanthus be preferred to digitalis, it being said that digitalis

raises the blood pressure more than strophantus.

Dr. Cowden asked for the indications and contra-indications for digitalis. He stated that it had caused death in three cases in which he had given it.

Dr. Gaines stated he didn't believe digitalis should be given in obstructive lesions and that the drug may be used with more advantage if the exact lesion in the heart is known. He favors phlebotomy in selected cases, but on account of the attitude of the laity toward that procedure it should be seldom used.

Dr. Hibbett emphasized the importance of heart disease as a cause of death and stated that in Nashville last year the absolute mortality was 102, being second to tuberculosis, which was 212.

Dr. Glasgow stated that patients should not take digitalis when going about.

Dr. Weaver stressed the value of purgatives in failing heart.

Dr. O. N. Bryan outlined Dr. Cabot's treatment of failing compensation, which consists of rest in bed, morphine and salines for a few days; then digipuratum is given. If this drug does not give relief, Cabot uses strophantus.

Dr. Dixon stated that the Carroll cure was of value, especially in nephritics. This consists of rest in bed and an exclusively milk diet. Milk is a low diet and is salt free. This often gets the bowels started without salines. He stated that he had never seen any bad effects from digitalis, even in large doses administered over a long period of time and the patient going about.

Dr. Bauman reported having seen delirium following the administration of digitalis in three cases.

Dr. Witt recalled Musser's article in the American Journal of the Medical Sciences, in which the latter plead for the use of opium, especially in heart failure with arterio change accompanied by anginoid attacks. Dr. Witt believes that the value of opium is very much overlooked.

Dr. Oughterson closed, referring to the points brought out in the discussion.

Dr. Sharber reported the following case. A white housewife of 38, who had been married for 16 years. Height, 6 feet 2 inches; weight,

298 pounds. Previous history good. Seven years ago was operated upon for hemorrhoids. Began menstruating at 12 years, always regular, but scant and accompanied by some pain. No history of pregnancy.

During the past few months she noticed some enlargement of the abdomen; recently she said she could feel a hard mass in the lower part, which was at times markedly tender. Occasionally she suffered with indigestion.

The patient was seen April 7, 1913, and gave the above history. At this time she had passed a normal menstrual period. A hard tumor was located in the abdomen which extended half way between the umbilicus and the os pubis. Temperature and pulse normal. Pelvic examination revealed the tumor which seemed to be attached to the uterus. Operation was advised. On April 16, patient was seized with severe pain in the abdomen and had shock. Another physician was called and he administered 1-4 gr. morphine and 1-150 atropine hypodermically. The pain was relieved, but the shock became more profound. The patient was extremely anemic, had air hunger and was restless when reached somewhat later in the evening. The tumor in her abdomen appeared to be much larger than at the time of the former examination. At this time, and when the other physician first saw her, she had a sub-normal temperature and her pulse was 54 and soft. The slowness of the pulse continued throughout the shock. She complained of pressure on the rectum. In discussing the case with another surgeon who had been called, hemorrhage into a cyst, twisted pedicle and possibly extra-uterine pregnancy were discussed. Hemorrhage was so strongly believed to be present that immediate operation was advised. The consulting surgeon favored waiting for reaction.

The patient was removed to St. Thomas Hospital and hypodermoclysis given while the patient was being anesthetized. Upon opening the abdomen it was found to be filled with clots and fresh blood. The tumor, which proved to be a fibroid, was pushed up by the clots in the pelvis. The tumor was pedunculated, the pedicle coming off from the fundus of the uterus. There were many adhesions

attached to the tumor, all of which were ligated and severed. The tumor was removed at the attachment of the pedicle to the uterus. An extra-uterine pregnancy—ruptured—was found on the left side, which was still bleeding freely. The tube was removed, the raw surfaces covered and the abdomen closed, after filling it with hot saline. The patient came off the table with a pulse of 74 and had reacted by the time she was placed in bed. The recovery was uneventful.

The points which appeal as being remarkable are: First, excessive size of the patient. Second, apparent rapid enlargement of the tumor. Third, pressure on the rectum. Fourth, severe hemorrhage with very slow pulse. Fifth, sterility for sixteen years. Sixth, rapid recovery.

Dr. W. A. Bryan reported a case of a boy who was shot in the head with a .44 revolver, the bullet entering just above the right eye and emerging through the left parietal bone, causing an egg-shell fracture of the vault of the cranium. There was a loss of an ounce to ounce and a half of brain substance. Patient is now well, the head has resumed its normal shape and the only untoward result is that of the loss of smell.

Dr. Glasgow reported a case of transverse presentation at term with prolapse of cord. Head was forced down and after engagement the bag of waters was ruptured and delivered with forceps. The child lived. Remarkable the ease with which head could be brought down with the bag of waters still intact.

Dr. R. A. Barr presented a case of a woman of 29 years, who had a pelvic abscess which ruptured through the vagina. Chronic intestinal obstruction followed. Just before she was seen, the patient suffered a great deal with alleged indigestion. Temperature, 99.1-2. Pulse, 130, rapid and weak. Patient looked sick, was distended, and had resistance on right side of abdomen. Vaginal examination gave a sense as if the pelvis was filled with plaster of paris. Rectal examination revealed the same. There were nausea and vomiting. Thought enterorrhaphy the only procedure that could be done. Hesitated, however, preferring to give morphia, water by the rectum and stomach lavage.

These latter were adopted. Later the patient passed gas and bowels moved. Since then has been on low diet.

Dr. Dixon asked what was the indications for frequent lavage when nothing was obtained from the stomach.

Dr. Barr talked on gastric lavage. Adjournment was taken.

May 6, 1913. The Academy was called to order promptly at 8:00 p.m., by President West. The minutes of the previous meeting were read and approved. Those present were: Drs. Harrington, Bloomstein, Hill, Williamson, Sharber, Minor, J. Witherspoon, Fuqua, Aycock, Harris, Eggstein, Oughterson, Thatch, Goodwin, McCabe, Billington, B. Tucker, Duncanson, Jr., Bromberg, J. A. Witherspoon, Overton, DeWitt, Sharp, and others.

The report of the Committee on the Revision of the Constitution and By-Laws was called for and in the absence of Dr. Tigert, the Chairman, Dr. Dixon made the report, reading the changes recommended by the Committee.

Dr. J. A. Witherspoon, seconded by Dr. Harrington, moved that the report be accepted, discussed and recommended for passage. This motion was "put" and carried.

Dr. J. A. Witherspoon then moved (seconded by Dr. McCabe) that the changes recommended in the Constitution be acted upon Tuesday, May 20. Carried.

Dr. J. A. Witherspoon moved (seconded by Dr. McCabe) that all parts of the report, except that part of the Constitution which must be deferred two weeks, be adopted. Passed.

The Secretary then read a communication from the Secretary of the State Association relative to medical defense. Dr. Perry Bromberg was called for and explained the scope and intent of the medical defense proposition as contemplated.

Dr. Sharber moved (seconded by Dr. Savage) that the recommendations of the Committee of the House of Delegates of the State Medical Association be adopted by this Society. Carried.

Dr. Cowden, as Secretary of the Board of Directors of the Academy made a report. This report embraced the facts that on March 24, 1912, Drs. Harris, Glasgow and Gaines turned

over to him \$424.49, and that he deposited same in the Nashville Trust Co. at four per cent interest; and that on April 22, 1913, there was to his credit in said bank \$441.65. Dr. Cowden also read the report of Dr. C. A. Robertson in turning over the money to the present Board of Directors. Drs. Savage and Tigert explained the "refunds" as mentioned in Dr. Robertson's report.

The question as to what disposition should be made of this money was raised, and Dr. McCabe moved (seconded by Dr. Bromberg) that the money in the hands of the Board of Directors be turned over to the Secretary-Treasurer of the Academy. Dr. Caldwell moved that Dr. McCabe's motion be tabled. This was seconded and carried. Dr. J. A. Witherspoon then moved that a committee be appointed to investigate the powers of the Board of Directors in the disposal of this money. Seconded and carried; the Chair appointing Drs. Harris, Hibbett, and Billington.

The paper for the evening was read by Dr. Billington on "A New Operative Treatment for Potts Disease." Dr. Billington presented a case and many photographs and X-ray plates in illustrating his paper. Dr. Savage noted the fact that Dr. Billington was the first to perform this operation in Nashville. The essayist in closing reported additional cases he has treated by this new method. The Academy then adjourned.

May 13, 1913. The Academy was called to order at 8:10 p.m. by President West, with the following present: Drs. Anderson, Morrissey, Hatcher, Jones, Sayers, Overton, Billington, Eggstein, Harris, Cooke, McCabe, Goodwin, Grizzard, Minor, Mitchell, Hill, Roberts, Davis, R. Caldwell, Cowden, L. Caldwell, Floyd, R. A. Barr, Duncan Eve, Jr., Pollard, and others. The minutes of the previous meeting were read and approved. The essay of the evening was by Dr. T. A. Mitchell, his subject being "Amoebiasis."

In the absence of Dr. Pickens, who was to open the discussion, the Chair called upon Dr. D. J. Roberts to open the discussion. Dr. Roberts stated that in the treatment of this condition he was allied to ipecac—a drug used by Galen and the early East Indians. He also used quinine sulphate in the proportion of

one dr. to an ounce of water, dissolved with the aid of tartaric acid, as an enema. The speaker stated that Rogers, in an article in the British Medical Journal, used the hydrochloride of emetin 1-10,000 as colonic irrigation. Rogers also used this drug hypodermically in doses of 1-2 to 1 gr. The average stay in the hospital of Calcutta, from which this report was given, was two and one-half days, when the emetin treatment was used.

Dr. Cooke stated that there had been a gradual invasion by this infection in this country in the interval between the years 1898 and 1905 and was possibly attributable to its dissemination by the returning soldiers from the tropics. Dr. Cooke protested against the use of the name "amoebic dysentery." The lesions being localized ulcerative processes in the large bowel, he suggested the term "amoebic ulceration" as a name for this disease. The speaker stated that the *Entamoeba Histolytica* was undoubtedly the causative agent and that the *Entamoeba Tetragana* was an intermediary stage of the former. In that tenesmus is the symptom which causes the patient to seek relief, due attention should be given this by local treatment.

Dr. Eggstein spoke on the cyst formation or spore stages of the different amoeba. The amoeba coli, which is non-pathogenic in man, will form a spore in nine hours; the *Entamoeba histolytica* is not less than nine days. The time that it requires to form spores may be used to determine the variety of amoeba present. He believes that the *Entamoeba Histolytica* and the *Entamoeba Tetragana* one and the same organism.

Dr. Hill asked if there are any cases of amoebiasis without dysenteric symptoms being present.

Dr. Jones quoted an article by Deeks in the Journal of the A. M. A. The latter states that on the Isthmus the use of ipecac in this condition has been abandoned, large doses of the sub-nitrate of bismuth being used, preceded by a castor oil purge. In view of the fact that the amoeba were hard to stain, Dr. Jones suggested that if a small quantity of an aqueous solution of methylene blue was placed on the slide, the amoeba would appear as highly refractile bodies in a blue back

ground, thus rendering their recognition easier.

Dr. West stated that of 229 specimens of stools sent in from various parts of the State to the State Laboratory, 48 contained amoeba coli, alone or in conjunction with other intestinal parasites. He also stated that in a State Institution 24 boys from 10 to 24 years were examined. Of these 23 had amoeba coli. Dr. West does not believe the amoeba coli harmless, as marked improvement followed any treatment directed to cleansing the alimentary canal.

Dr. Cooke spoke further on the treatment. Deeks of Ancon Hospital gave three to four drs, a day of bismuth sub-nitrate for days at a time. Dr. Cooke believes that ipecac is potent in bacillary dysentery, but has been unable to get any satisfactory results by the administration of ipecac in the treatment of amoebic ulceration. Is anxious to try emetin. He stressed the point that one must recognize the local symptoms and should give the patient relief from local trouble. For the local condition he uses silver nitrate, 60 grs. to 1 oz. The coal oil treatment, which was run upon by Haynes, of Louisville, Ky., he had used in 30 cases with entire satisfaction. One must use 3 or 4 pts. This treatment had relieved cases which had gone through the ipecac treatment.

Dr. Cowden said he had seen no benefit from the ipecac treatment. He discussed appendicostomy with irrigations.

Dr. Floyd reported three cases treated with emetin. In one case 1-2 gr. was given twice a day, increasing to 1 gr. twice a day. The patient was in the hospital ten days. In three weeks the patient was apparently cured, having gained 27 pounds in weight. In another case, that of an abscess of the liver which had been draining an oz. to 1 1-2 ozs. daily over a period of three years, the same treatment was instituted. In ten days the discharge had almost ceased. The patient did not report for further observation. The third case was seen in consultation; this treatment was advised and the patient sent back home. Did not know the results in this case as yet. In these cases plain emetin was used as he was unable to get the hydrochloride or the hydrobromate.

Dr. Mitchell closed the discussion on Amebiasis.

Under the head of case reports, Dr. Cowden reported a case of headache "almost" relieved by a complete supra-vaginal hysterectomy. The headache has returned and the patient has begun to menstruate, although both ovaries were removed. The menstruation has been regular for the past three months.

Dr. R. A. Barr said that menstruation after a double ovariectomy is common. He suggested that Dr. Cowden had probably done a rather high supra-vaginal amputation, leaving some of the body of the uterus. Dr. Barr discussed the relative merits of total and supra-vaginal hysterectomy and said that unless especially contra-indicated he does a pan-hysterectomy. He stated that there was a possibility of malignancy in Dr. Cowden's case.

Dr. Barr reported having punctured a uterus in doing a curettage in an infected uterus six months after labor. He had intended opening the abdomen in any event so this was done and a hysterectomy performed. The uterus was extremely friable. There was no special tubal or ovarian pathology. The patient recovered.

Dr. McCabe said that puncturing the uterus was a very easy matter. Had seen at autopsy a catheter under the liver, which had been passed in the uterine cavity on a stylet to produce a criminal abortion. He remarked that curettage is not a simple matter, especially in view of the possibility of this accident.

Dr. Cowden spoke in advocacy of a sharp curet, especially one that will not take up any tissue when drawn across a surface. He advocated cul-de-sac drainage if uterus should be accidentally punctured instead of opening above.

Dr. Mitchell reported having punctured a uterus.

Dr. Robert Caldwell spoke against the use of a curet, for he doesn't believe the endometrium can be removed by curetting. If he should puncture a uterus—as he did in one case—would not go into the abdomen immediately. Nature would take care of a mild infection and if the infection was virulent he wouldn't want to do a hysterectomy. The

patient referred to got well without any interference.

Dr. Barr replied that he agrees with Dr. Caldwell in the main. He thinks that euretting does more good in the cervix than in the body of the uterus. As to the case he reported he intended going into abdomen to remove the appendix and after getting in and noting the condition of the uterus he decided to remove it. In regard to hysterectomy in the presence of infection Dr. Barr stated that many good men advocated this. Adjournment at 9:30.

May 27, 1913. The Academy was called to order at 8:05 p.m., with President West in the chair. Among those present were: C. F. Anderson, Nichol, L. Smith, Bloomstein, Wilson, Oughterson, Sharber, Cullom, Goodwin, Hill, Savage, Black, Glasgow, Billington, Duncan Eve, Jr., L. Caldwell, Sharp, Williamson, Eggstein, McCabe, Harrington, H. Barr, Simons, Davis, T. Briggs, J. Witherspoon, Tigert, L. Edwards, Pollard, Bromberg, Hibbett, and R. Caldwell.

The minutes of the two previous meetings were read and approved. The essay of the evening was by Dr. Owen Wilson, his subject being "The Management of Some Phases of Difficult Feeding in Infants."

Dr. S. M. Bloomstein opened the discussion and spoke of the change in the past years as to the type of food which is alleged to be the cause of the trouble; first proteids, then fats and now carbohydrates. He agreed with the essayist that each case of difficult feeding is a law unto itself. He believes, with the essayist that Loefflund's Malt Soup is good, but like all artificial foods is not suitable in all cases. It has a fault in being expensive. Plain Maltine with flour has been suggested as a substitute for malt soup. He gets better results from buttermilk than any other one food in difficult cases. He stated this is widely used in Germany.

Dr. Harris remarked that maltose was an old rather than a new food for infants and in this connection mentioned Mellin's Food as containing more maltose than any other food mentioned. He stated that the starch in the malt soup may assume a gelatinous state and soothes the inflamed intestinal mucousa. In

view of the different methods of feeding infants in different countries, Dr. Harris suggested that there was more to this subject than the method of feeding.

Dr. Keller reported having had two cases of scurvy in children of the same family. Mellin's food was used as diet of these children. He suggested change, but the mother had raised thirteen others on it and she refused. The children improved on fruit juices, etc.

Dr. Wilson in closing stated it would not do to follow literally the directions on any patent food. Malted Milk has too much maltose and too little milk for younger children under three or four months. He has used Mellin's Food for years, but not with the success that he has Malt Soup. Believes that malt soup should not be used in very young children unless very dilute. Malt foods have a tendency to produce scurvy, but these are not permanent foods and should be used only for a relatively short period. Dr. Wilson quoted Neff, of Kansas City, as saying malt soup is the most desirable of foods.

Under the head of case reports, Dr. Larkin Smith reported three children of the same family, ages twelve, seven, and two; the first two of which had rheumatic fever at the same time, five years ago, and now both have typical mitral regurgitation. The child of two years now gives a history of crying all night with pains in limbs, etc., probably rheumatic. All have enlarged tonsils.

Dr. Cullom spoke of the relation of infected tonsils and heart lesions.

Dr. Oughterson stated that it was generally conceded that the inroad of joint involvements is through the tonsils in most cases. He believes that a murmur during an attack of acute tonsillitis is common, the murmur clearing up as the case gets well. Believes that the arthritis, as reported by Dr. Smith, infectious with entrance through the tonsils.

Dr. McCabe reported a case in connection with Dr. Smith's. A negress of 36 years was admitted to the City Hospital with tonsillitis. This subsided with the usual treatment. The physical examination was negative. In six days she had a chill, the temperature rising to 105 F. Subsequently she had two or three chills daily with an irregular temperature chart. On physical examination

a mitral murmur was detected. Leucocytes, 18,000. Blood culture negative. Agglutination test for typhoid and para-typhoid negative. Her ureters were catheterized with a negative result. Some dullness appeared at the base of the left lung and the pleural cavity was aspirated, but no fluid obtained. She died on the 20th day. An autopsy was performed by Dr. Eggstein.

Dr. Eggstein was called for and detailed the following pathological conditions found at post mortem: pericardium was 1-4 inch thick; 1 quart of fluid in left pleural cavity; miliary abscesses in kidney, liver and lower parts of both lungs; terminal pneumonia in left lung; enlarged thyroid. The tonsils were not removed. Cultures taken from the pleura and abscesses were negative.

Dr. Simmons reported a case of primary syphilis of the bladder. The written report was not handed to the Secretary.

Dr. Wilson reported a typical facial erysipelas in a child of six years of age. Adjourned.

J. F. GALLAGHER, Secretary.

CARROLL COUNTY.

The Carroll County Medical Society met in Huntingdon on May 27, with a fair attendance, and held a very interesting meeting; some real good clinics being presented, which were freely discussed. This being our regular clinic day there were no papers read.

The resolution presented at the last State Meeting, on medical defense, was taken up and adopted unanimously by the Society.

We expect an interesting program for our next meeting.

B. C. DODDS, Secretary.

JACKSON COUNTY.

The Jackson County Medical Society met in the Court House at 10 a.m., March 17. The meeting was called to order by President J. B. Hix, and the roll call found the usual good number in attendance. Minutes of the February meeting were read and approved.

Dr. Anderson reported further on his case of tetanus, which had developed into rheumatism, and controlled by the administration of the salicylates. Dr. Fowler reported a case of otitis media with a mixed infection, which he says he treated with streptococcus injections and cured.

Phylacogens were then freely discussed.

At 1 p.m., the Society reassembled and appointments were taken up with the following results: Delegate to State Meeting, Drs. J. D. Quarles; Alternates, Drs. F. B. Clark and L. R. Anderson.

Dr. O. M. White, who was to present a paper on "The Personality of a Physician," phoned he was unable to be with us on account of the high water. This was the first meeting since the organization of this Society that we have not had a paper, but the Cumberland River was on a rampage.

The Jackson County Medical Society will meet in Granville, the west end of this county, twelve miles below Gainesboro, on May 17. We propose to carry the Medical Society to the Granville doctors since they will not come to it.

The following papers will be presented:

"Preventive Medicine," by C. E. Reeves, M. D.

"Hookworm Disease," by J. B. Hix, M. D.

"The Prevention of Tuberculosis," by L. R. Anderson, M.D.

At the next meeting held in Gainesboro, Dr. C. E. Reeves will read a paper on Pellagra, and Dr. J. D. Quarles will open the discussion.

C. E. REEVES, Secretary.

WASHINGTON COUNTY.

The Washington County Medical Society met in regular monthly session, April 3, and was called to order by President H. C. Miller. Minutes of the previous meeting were read by the Secretary and approved. The following members were present: Drs. H. D. Miller, Cox, Matthews, West, Long, Kennedy, Sells, Randall, Broyles, Cease, and Dulaney.

Under clinical reports Dr. Cox reported further on his former case of Spleno-Medullary Leukemia, the patient being present was offered for examination. Since the last examination of this case, four months ago, the size of the spleen was found to be remarkably reduced, especially was it noticeable in a deep sulcus or nich just below and to the left of the stomach. The blood pressure in this case is, at the present time, 122; age of patient is 33 years. The blood count shows,

red cells (somewhat irregular), 3,072,000; white cells, 506,000; haemoglobin fifty per cent. Patient shows slow improvement after serious onset eighteen months ago. The most satisfactory drug treatment in this case was liquid bland with arsenic and strichnia. The distressing headaches, pressure symptoms and gastro-intestinal disturbances have been relieved and there is gradual improvement in the case.

Dr. West reported on a case of successful removal of a double pus tube infected, associated with extensive pelvic adhesions, patient very anaemic, but recovery uneventful and without any infection.

Dr. Long reported a case of breech delivery in which he was unable to reach one arm or shoulder and delivery was made with one hand and arm over the head in the delivery and the child lived. It was thought that in the roomy pelvis, the presence of the arm over the head saved the circulation in the cord. He reported that there was in this case also an adhered placenta which necessitated the removal by the hand. There being no untoward symptoms following this case, mother and child are doing well.

Dr. Dulaney reported a case of eclampsia in a pregnant woman at the sixth month, following a severe fright from a bloody finger of a child. The urine in this case was found to be heavily loaded with albumen which continued to decrease after delivery, and by the sixth day entirely disappeared. The solution to this case was thought to be that the fright was the exciting cause of early eclampsia, and the idea of increased albuminaria due to fright was suggested in the discussion. It appears that this case was a perfectly normal one until the fright. After delivery, patient made a speedy recovery.

Dr. Miller reported a case of supposed toxemia in a child, resulting in fatal termination in two days. The child was three years of age and had been weaned three weeks prior to this attack. It was taken suddenly ill with violent vomiting and purging. After the ordinary administration of evacuants, etc., child appeared much relieved on the next morning, but in the evening was found in extreme collapse, followed by death. It was thought that failure to evacuate the intes-

tinal toxic element was the cause of sudden collapse.

At this juncture, the essayist, Dr. Randall presented his paper on "The Therapeutics of the Belladonna Group." Dr. Randall gave a very interesting and practical paper, and in many instances dealt with new ideas in the use of this drug. The paper showed study and interest in his subject. He made himself a strong advocate of large doses of atropine in severe shock, even to the one-tenth of a grain. Especial attention was given to the use of this drug in ophthalmic work, and to leaky conditions, ptialism, night sweats, incontinence of urine, painful spasmodic conditions, acute coryza, etc.

In the discussion of this paper, which was very free, caution in dosage was emphasized, also a careful watch for the physiological results. Stress was especially laid on the use of atropine in ophthalmic treatments by Dr. Broyles, in that the intra-ocular tension should always be ascertained before the installation of this drug, and further, that it was the sheet anchor with those following eye work.

Dr. Miller called the attention of the Society to the great value of atropine in connection with morphine prior to anaesthesia in surgical operations, which custom was almost unanimous with surgeons of this day.

After a short consultation regarding the organization of a City Board of Health, which a committee now has in hand, the Society adjourned, to meet again on the first Thursday night in May. Dr. G. J. Sells will be the essayist for this meeting.

The Johnson City and Washington County Medical Society met in regular session on the first Thursday evening in May, and was called to order by the President, Dr. H. D. Miller. Minutes of the previous meeting were read and approved. The following members were in attendance: Drs. H. D. Miller, Long, Randall, Broyles, Sells, Matthews, West and Cox, of Johnson City; Drs. Panhorst and Dulaney, of Jonesboro, and Dr. Sherrell, (col.), visiting.

Under clinical cases, Dr. Sells reported the delivery of three recent breech cases of obstetrics with marginal placenta previa in one;

two of the children were still born and one survived by reason of its size and quick delivery. The patients did well. The reported case of eclampsia, read in the minutes of the last meeting, calling attention to a case of Dr. Sells, due to fright in the absence of albuminuria, was followed by two severe convulsions recurring in two days. The patient, however, progressed to a natural confinement without any recurrence at the time of labor.

Dr. Long reported an interesting case in a woman who had had a cancerous breast removed, which had been followed by the most excruciating pain in the arm on the same side, with great oedema, and at this time requiring 1 1-4 grains of morphia for temporary relief from three to five hours. Recurrence of the disease in progress around the cicatricial tissues. Case thought to be hopeless. The swelling and pain in the arm was thought to be due to nerve injury and interference with the lymphatics and blood vessels.

All the clinical cases were well discussed by the membership.

Dr. Sells then presented a paper on "The Digestive Tract," entering into the physiology, anatomy and actions of the different ferments and their action and office in the process of digestion, laying especial stress upon the care of the teeth. The doctor was highly complimented upon his paper, and was awarded great credit in talking his subject instead of reading it, and especially, in not forgetting or repeating the salient points in his discussion of his subject.

Medical Defense was then discussed and more definite ideas as to its meaning were defined and brought out, and the question of whether the members would be denied membership should they not wish to pay the medical defense fee. This matter was laid over until the next meeting. The general opinion of the Society, however, is for the adoption of medical defense when it is fully understood.

The essayist for the June meeting will be Dr. Panhorst, his subject being "Toxemia."

The Society adjourned, to meet again the first Thursday night in June.

J. W. COX, M.D., Secretary.

GREENE COUNTY.

The Greene County Medical Society met in regular session on April 7, in the office of Dr. C. P. Fox, President M. A. Blanton presiding.

The minutes of the previous meeting were read and approved. The following members being present: Drs. Hawkins, Woodyard, Newland, W. B. Taylor, Campbell, Fox, Moore, Bright, Woolsey, Borden, Bell, Blanton, Huffaker, and Lane. Dr. M. A. Blanton was excused from giving the President's address, with the promise to favor us with it at the next meeting. Dr. R. O. Huffaker read an excellent paper on "Neurasthenia," which was discussed by Dr. Fox, and closed by the essayist. Dr. Fox favored the Society with a beautiful demonstration of Tubercle Bacilli under the microscope.

Dr. M. A. Blanton reported a very interesting case of dropsy, (so diagnosed by patient) which upon physical examination, proved to be a case of pregnancy and twin babies were delivered. They had evidently brought about a condition which resembled one of dropsy and which caused the error in the patient's diagnosis. Dr. Bell reported an interesting case of hour glass contraction of the uterus with adherent placenta in a case of neglected labor. Dr. Hawkins reported two cases of prolapse of the funis with loss of child in both cases.

Dr. Newland reported a case in which after the administration of any drug, even in minute doses, there would be complete exfoliation of the epidermis in large flakes of the forearm, hands, legs, and feet. Patient's general health good.

There being no further business, the Society adjourned, to meet in the office of Dr. W. H. Hawkins on first Monday in July.

J. F. Lane, Secretary.

SMITH COUNTY.

The Smith County Medical Society met in regular session, in Dr. C. H. Donoho's office, Carthage, Tenn., April 4, 1913, with a goodly number in attendance.

The regular order of business was taken up and disposed of.

Dr. Olin West, of Nashville, an attache of

the State Board of Health, and one of his field men, Dr. W. P. Robinson, were present and gave able and instructive addresses on hook-worm disease, and clear demonstrations of results being obtained.

The Smith County Medical Society gave these gentlemen and the cause they represent, a unanimous endorsement and memorialized the Smith County Court to appropriate the sum of \$150, to aid the State Board of Health in establishing free dispensaries in the county for the treatment of hook-worm disease.

The proposition was brought before the court while in quarterly session assembled, April 7, 1913 and carried by a ballot of 47 to 1.

Dr. J. H. King, of Chestnut Mound, Tenn., who has recently returned from New York where he has been taking post-graduate work on skin diseases, read an exhaustive and instructive essay on "Epithelioma of the Face." He also presented three clinical cases in demonstration of his work.

The paper was discussed by Drs. Olin West, F. Swope, J. J. Beasley and J. G. Bridges.

Program for May meeting:

(1) "Articular Rhenmatism," by M. N. Alexander, Difficult, Tenn. To open discussion, Dr. J. S. Campbell, of Gordonsville, Tenn.

(2) "Iritis," by Dr. J. G. Bridges, of New Middleton, Tenn. To open discussion, Dr. R. E. Key, of Monoville, Tenn.

(2) "Acute Ileo-colitis," by Dr. R. B. Williams, of New Middleton, Tenn. To open discussion, Dr. I. H. Beasley, of Dixon Springs, Tenn.

B. J. HIGH, Secretary.

THE NEW VACULE PACKAGE.

A novel package is now being extensively advertised by the H. K. Mulford Company, of Philadelphia as the "New Vacule Package." These "vacules" are vacuum containers especially employed for the prevention of deterioration of the activity of potent drugs, especially digitalis, ergot and strophanthus. Careful investigation show that many preparations undergo changes, even when kept in tightly corked bottles, which result in a great loss of activity and thus render them unreliable as therapeutic agents.

Only recently was it discovered, as the result of a series of experiments conducted in the Mulford Research Laboratories, that the changes to which the deterioration in these preparations is due, are caused primarily by the action of oxygen of the air which is held in solution in the liquid.

Further investigation show that with complete exhaustion of air from the container and its contents, practical permanency may be secured, and in accordance with this, the H. K. Mulford Company have placed upon the market standardized preparations of Ergot, Digitalis and Strophanthus in "Vacules" (Vacuum Ampuls), which differ from ordinary "sealed ampuls" in that all the air is removed from the liquid contained in the Vacules, which ensures permanency to the product.

AN APPEAL FOR A MONUMENT COMMEMORATING JOHN MORGAN, FOUNDER OF THE FIRST SCHOOL IN THE UNITED STATES OF AMERICA.

John Morgan was born in Philadelphia, Pa., in the year 1735. He received his A. B. degree from the College at Philadelphia, now the University of Pennsylvania, in 1757. He was graduated Doctor of Medicine from the University of Edinburgh, and became a Licentiate of the Royal College of Physicians of London, and later a Fellow of the Royal Society.

During the Revolutionary period, Dr. Morgan was Director General of the Hospitals and Physician in chief of the American Army. He was also a member and Secretary of the American Philosophical Society of Philadelphia, and in 1787 a Fellow and one of the founders of the College of Physicians of Philadelphia, and later one of its Censors.

In 1765, he persuaded the Trustees of the College of Philadelphia to organize the first medical school in America, and in this institution he became professor and lectured for three years. He was thus in the fullest sense the Father of Medical Education in the United States of America.

Dr. John Morgan died October 15, 1789 and lies buried within St. Peter's Church, Philadelphia. No monument marks the place

where his remains repose. It seems now desirable to the Philadelphia Medical Alumni of the University of Pennsylvania that the name of John Morgan should be fittingly honored by some appropriate monument.

It is believed that the Medical profession in general in the United States, and all who directly or indirectly have owed anything to medical education will heartily approve of this movement. Much has been done to commemorate the heroes of war, but to few men does the country owe a heavier debt than to John Morgan, who is certainly the undisputed parent of our first medical school, and therefore of medical education throughout the country. It is hoped therefore that all medical institutions here and elsewhere may be in sympathy with this commemorative movement and unite with us in suitably marking the last resting place of John Morgan and erecting a monument in memory of his great services to the medical profession.

This idea of a memorial monument in some attractive form has been so graciously received and so hopefully considered that there is no doubt of the purpose of this committee being affected. It is therefore with pleasure that we ask you to consider with favor the enclosed appeal for financial aid and the accompanying statement concerning the method by which contributions will be collected and forwarded.

Edgar Fahs Smith, M.D., Provost of University of Pennsylvania.

S. WEIR MITCHELL, M.D.,
WILLIAM OSLER, M.D.,
WILLIAM PEPPER, JR., M.D.,
CLARENCE P. FRANKLIN, M.D.,
SWITHIN CHANDLER, D.M.,

Chairman.

ODE TO MY GOITRE.

'Twas in St. Thomas, one bright May day,
The doctors came and took you away,
It cost me some pain to have you go,
But 'twas not sorrow I'd have you know.
Upon my neck you had thought to loitre,
You had old exophthalmic goitre,
You gave me such a terrible tremor
The like of which I shall always remember,
You made my heart go pit a pat,
Yes, most of the time it was faster than that.

So much like a cannibal you seemed to be,
You took all the flesh right off of me.
Whether you are in the furnace or in alcohol,
I don't give a dog-gone at all.

So here's to the doctors who took you away
While in St. Thomas that bright May day;
Come what will and come come what may
I shall love them dearly till my dying day.

—Star Patient.

Book Reviews

A MANUAL OF CHEMISTRY. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Medicine, Pharmacy, and Dentistry. By W. Simon, Ph.D., M.D., Professor of Chemistry in the College of Physicians and Surgeons, Baltimore, and in the Baltimore College of Dental Surgery; Emeritus Professor in the Maryland College of Pharmacy; and Daniel Base, Ph.D., Professor of Chemistry in the University of Maryland. New (10th) edition, enlarged and thoroughly revised. Octavo, 774 pages, with 82 engravings and 9 colored plates, illustrating 64 of the most important chemical tests. Cloth, \$3.00 net. Lea & Febiger, Philadelphia and New York, 1912.

For years Simon's Chemistry has been the text-book of choice in the teaching of chemistry in a great number of medical schools. The fact that it has gone through ten editions is sufficient evidence of its worth. In this, the tenth edition, the authors preserve the plan and characteristics that have won for it the degree of approval in former times. It has been thoroughly revised and enlarged to include all the modern advances which have been made in chemistry, and furnishes, we believe, in concise form the clearest presentation of the science offered to the profession today.

J. G.

BOOKS RECEIVED.

EPIDEMIC CEREBROSPINAL MENINGITIS. By Abraham Sophian, M.D., formerly with New York Research Laboratory. Twenty-three illustrations. Price, \$3.00. C. V. Mosby Company, St. Louis, Mo.

ANNUAL REPORT of the Surgeon-General of the Public Health Service of the United States, for the fiscal year 1912.

CHLORIDE OF LIME IN SANITATION. By Albert H. Hooker, Technical Electrochemical Company. John Wiley & Sons, New York City.

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ANOCI-ASSOCIATION WITH A SPECIAL REFERENCE TO ABDOMINAL AND EXOPTHALMIC GOITRE OPERATIONS.*

By George W. Crile, M.D.,
Cleveland, Ohio.

It is my first and pleasant duty to express my sincere appreciation of the honor you have conferred upon me in your invitation to address you on this notable occasion—made the more notable by the high attainments of your members and the luster they have shed on the medical profession of the entire country.

It is the purpose of this paper to offer evidence upon which a new principle of operative surgery is based. My argument assumes that man is a motor being in the sense that Sherrington uses this phrase; it assumes that physical action and emotional activity are only expressions of motor stimulation; it assumes that there are in every active animal and in man stores of energy which, when released, are expressed in motion or emotion; and that as these stores of energy are consumed, fatigue or exhaustion is produced. We shall present evidence to show that inhalation anesthesia does not wholly prevent the discharge of energy caused by an operation; that the discharge of energy of the brain cells is caused by emotional excitation, such as fear, just as readily as by physical injury;

and also that the brain cells show physical changes corresponding to the exhaustion.

Turning first to the effect of physical injury, I have found that animals subjected to sufficient trauma under ether or under nitrous oxide anesthesia present a state of low vitality or surgical shock, and that their brain cells show corresponding physical changes. Under nitrous oxide, as compared with ether, the animals required approximately three times as much trauma to produce an equal amount of depression of vitality, and equal physical changes in the brain cells. What is the cause of these changes in the brain cells and the loss of vitality?

First of all let us inquire as to whether or not inhalation anesthetics act on all parts of the brain alike.

If inhalation anesthetics acted on all parts of the brain alike, then the function of all the brain cells would be suspended—that is to say, the patient would be dead. Beginning then with the premise that only a part of the brain is asleep under inhalation anesthesia, we may ask what is the effect on the awake brain cells? These cells respond to the physical injury of surgical operation by an effort to escape from the operating table and to escape from the surgeon, and these cells are just as wide awake, and are just as active as the cells of the brain in the normal wide-awake state. This statement is based on the following observations:

During a surgical operation there is, in response to every incision, every pull of the retractors, indeed to every physical contact, a change in the pulse, the respiration, and the blood pressure. These changes are a part of

*Read before Tennessee State Medical Association, April, 1913.

a physical act, an effort to escape from the injury. This is further shown by the fact that if the anesthesia is light and the operator is rough, then the patient moves purposely on the operating table. It is this that leads to the exhaustion of the operation and the physical changes in the brain cells. The entire so-called subjective mind is unanesthetized, hence is fearfully punished in the course of operation.

Let us take still another viewpoint. Suppose that instead of the usual anesthesia we gave our patient curare—giving at the same time artificial respiration by intratracheal insufflation. Such a patient would not be able to move a muscle nor could he utter a sound. There would be absolute muscular relaxation and death-like quiet during the operation, but in spite of the fact that the muscular system would be wholly paralyzed, the mind would be perfectly clear and the sense of pain normally keen.

Now what would be the effect upon a human being if a prolonged surgical operation were performed under curare? What would be the state of the nervous system of such a patient when finally he emerged from the muscle-paralyzing influence of the curare and could express his horrible experience in words? This is precisely the predicament of the subjective mind of our daily operation. It is as completely unprotected under ether as under curare—and suffers just the same.

It has been shown that animals under curare and morphia when subjected to trauma succumb to shock-producing trauma as readily as they do under ether. With these facts we can understand by what influence a strong, robust patient who enters the operating room in the full tide of health, an hour later emerges broken and beaten and shattered, requiring months, perhaps years, to fully recover. It is for the same reason that when run down by a railway train and mangled, man is shattered and broken, as he is if he has passed through a horrifying experience such as that of having a pistol pressed against his forehead in the night by a highwayman, or of being the witness of a murder, or of undergoing any of the nerve-shattering stimuli of life. These, and all of these, are motor stimuli, and whether they impair or

whether they break the nervous system, their effect is just the same as the effect of surgical operations.

There is an interesting fact concerning the psychic state of the patient at the time of the operation. If the patient is in grave doubt as to whether or not he can survive the operation; if he lacks confidence in the hospital or in the surgeon, the patient has what in psychology is known as a low threshold, and if he goes under the anesthetic in this state, the effect of any physical injury will be augmented and throughout the entire anesthesia there is manifested the evidence of fear in the respiration and the pulse, and in the way in which he reacts to the anesthetic and the trauma of operation. These patients take the operation poorly. It is as though the patient went under the operation with his motor set at high speed, so that the energy of the body is consumed more rapidly, and hence the exhaustion or shock is increased.

On the other hand, we know that if the field of operation is temporarily disconnected from the brain by the use of a local anesthetic, then no matter how severe, nor how extensive, nor yet how prolonged the physical injury in the zone thus blocked, no exhaustion follows, and no brain cell changes are seen.

What are the mechanisms that receive the injury impulses which are transmitted to the brain and cause a discharge of nervous energy, leading to exhaustion, to altered personality, to nervousness and all the chain of evil consequences? These mechanisms are the nerve endings, the nerve fibres, and all of the nervous system. The nervous system acts as a unit, as a whole, and responds to but one stimulus at a time. Hence it is that if one part of the body is injured the entire nervous muscular system acts in a self-defensive manner.

Now, in the body there have been implanted innumerable nerve receptors for the purpose of effecting adaptation to environment. Some of these receptors, such as those assisting in acquiring food, may be designated beneceptors, while other receptors have as their function the protection of the body against harmful or noxious contacts. These are nociceptors. The nociceptors are not distributed over every part of the body equally, but are

more numerous in those parts which were most frequently, in the course of evolution, subjected to injury.

Hence, we find in the skin the nociceptors are most numerous in those parts most exposed to contact with the outer world, viz: in the hands and the feet; the back being less exposed has fewer nociceptors. In the deep, protected parts of the body there are few nociceptors. In the brain, which through all time was protected by a skull, no nociceptors are found. The brain has no pain sense. One may probe the brain of an awake patient at will without even his knowledge. It follows, therefore, that the effect of an operation in this or that portion of the body is dependent upon the phylogenetic exposure, or the number of nociceptors the part contains.

Physical injury of any sensitive area, that is, an area having nociceptors, causes a discharge of nervous energy leading ultimately to exhaustion. The exhaustion is due to forced driving of the motor mechanism. Equally well may exhaustion be produced by certain perceptions through the special senses, such as hearing or seeing a dangerous enemy.

Now, the human machine may be driven by a physical contact stimulation of the nociceptors implanted within the body, or it may be driven by perceptions through the special senses. Whatever the cause may be, the stimulus is always through the awakening of associative memory, that is, all action is on the law of association through memory, that is, through Phylogenetic Association.

Harmful or noxious associations are called noci-associations. If, then, an operation be so planned that all harmful or noxious associations are prevented, this state is designated Anoci-association, that is to say, without noci-association. Practically applied, it means that a surgical operation performed on this principle must be so conducted that there is excluded from the brain all noci-association.

This may be accomplished as follows: The surgeon must have so thoroughly prepared himself for his work, and so controlled his surgical surroundings, that he can truthfully say to his patient that his operation will be distinctly safer than his disease; that the operation will be so conducted as to be devoid of either painful or dramatic incident, and

that he will have no unpleasant experience to reflect upon afterward. The patient should be given much personal consideration by the surgeon himself; and if no contra-indication exists the patient should be given the benefit of a solacing dose of morphia, or morphia and scopolamine. The management of a patient up to the point of anesthesia should be by nurses, orderlies and physicians who are humanitarian psychologists. The anesthetist should be even more of a psychologist, and preferably a woman, as she is a more delicate recording machine. Anoci-association may be further promoted by the use of nitrous oxide which is pleasant in comparison with suffocating ether, provided only that the anesthetist is an expert in the administration of this particular anesthetic. The safety of nitrous oxide in the hands of an expert is demonstrated by the fact that in Ohio four trained anesthetists—three in Cleveland and one in Toledo—have used nitrous oxide for general anesthesia in 19,000 cases without a single anesthetic fatality.

When under anesthesia, the brain may be entirely isolated from the field of operation by a careful infiltration of a solution of 1-400 novocain just as completely as if no general anesthetic had been given, and during the operation a special consideration of accuracy and gentleness should be observed. In this manner an operation, however extensive, may be performed without materially driving the motor mechanism, hence without consuming nervous energy; hence it becomes a shockless operation. At the close the zone of operation is cut off for two days from communication with the brain by an injection of quinine and urea hydrochloride, so that the after-pains and post-operative nerve-exhausting stimulations may be avoided.

Abdominal Operations.

First. Excluding infancy, old age and depressed vitality, we first administer, on an average, one-sixth of a grain of morphia and 1-150 of a grain of scopolamine one hour before operation.

Second. If local anesthesia alone is employed, novocaine in 1-400 solution is used by progressive local infiltration.

Third. If inhalation anesthesia is employed,

we then administer nitrous oxide, either alone or with ether added as required.

Fourth. As soon as the patient is unconscious, infiltration first of the skin and then of the subcutaneous tissue with 1-400 novocain is made. In order to spread the novocain immediate local pressure with the hand is applied. Anesthesia is immediate. Incision through this anesthetized zone exposes the fascia. The fascia is then novocainized, subjected to pressure and divided. This brings us to the remaining muscle or posterior sheath and to the peritoneum. These structures are then infiltrated with novocain, subjected to pressure and divided within the blocked zone. If blocking has been complete, then upon opening the abdomen there will be found no increased intra-abdominal pressure, no tendency to expulsion of the intestines, and no muscular rigidity.

Fifth. The peritoneum is next everted and infiltrated with one-half per cent solution of quinine and urea hydrochloride completely surrounding the line of proposed sutures and is subjected to momentary pressure. This infiltration serves as a block, and as its effects last for several days, it should prevent or at least minimize the post-operative wound pain and the post-operative gas pains, and by so much minimize post-operative shock. Quinine and urea causes a certain amount of edema of tissue lasting some time after the wound is healed.

Sixth. The relaxed abdominal wall will permit exploration of the entire abdominal cavity with ease. If in the field of operation there is no cancer and no acute infection, then the following regions may be blocked as completely and in the same manner as the abdominal wall, viz: the meso-appendix, the base of the gall bladder, the uterus, the broad and the round ligaments, the mesentery, and any portion of the parietal peritoneum. Operations on the stomach and intestines made without pulling on their attachment causes no pain, and hence requires no novocain block. The closure of the upper abdomen is thus made as easy as the closure of the lower—all is done with the ease of relaxation. What is the result? No matter how extensive the operation, no matter how weak the patient, no matter what part is involved, if

anoci technique is perfectly carried out the pulse rate at the end of the operation is the same as at the beginning—the post-operative rise of temperature, the acceleration of the pulse, the pain, the nausea, and the distension are minimized or wholly prevented.

Graves' Disease.

I believe everyone will agree that a technique that can carry an advanced exophthalmic goitre case through an operation without increasing the pulse rate can all the more readily do as much for any other operation. This can be done by the following technique—the operation being either ligation or lobectomy:

If ligation is made, it is performed without removing the patient from his bed. In performing ligation nitrous oxide may or may not be administered; but during the operation a complete local blocking with novocain is employed, and the entire raw field is blocked by quinine and urea hydrochloride infiltration at the close of the operation.

If lobectomy is to be performed, consent to operation is secured several days in advance, the patient being kept in ignorance of the day on which it will take place. The patient is anesthetized free from psychic strain, as he is under the impression that he is receiving an inhalation treatment.

When under anesthesia the patient is taken to the operating room. The division of tissue is preceded by a complete blocking so that no activating impulse can reach the brain. Before closing the wound a one-half per cent solution of quinine and urea hydrochloride is infiltrated into every part of the raw field with a hypodermic needle. The patient is kept unconscious, under anesthesia, until he has returned to his room and until his room is restored to its previous condition. In the course of the cycle from his room to operation and return the brain has received no activating stimuli, and there can be no change in the pulse.

The immediate control of harmful stimuli, however, is not the end of the benefits of this operative method. The post-operative hyperthyroidism is prevented or minimized, and to the same extent that the immediate results

are improved so are the later clinical results improved.

What happens to a case of Graves' disease which is not under surgical treatment when subjected to a severe psychic shock—to a heavy strain or to deep worry? The disease is aggravated for weeks or for months, and not infrequently death results. The stress of facing the operating room is not only immediately seen, but is perpetuated on the following days and weeks and months by its frequent recall. From this handicap the anoci patient is free, and by so much is the convalescence speeded on its way.

Clinical Results.

The test of any research, and theory, is the clinic—and the clinic only. Any theory is worthless unless it gives practical results. The clinical results I can report have been confirmed by the personal experience of a number of good clinicians—Bloodgood, Cabot, and others. The work of the nurse is greatly minimized and the clinical aspect in or out of the operating room is altered. My associate, Dr. W. E. Lower, and I during the past year performed 729 abdominal sections under this method with a mortality rate of 1.7 per cent; and in the Lakeside Hospital service where all kinds of acute emergencies are met, and where most of my own private work is done, there were performed by my associate and myself in the past year operations on 2,672 patients with a mortality rate of 1.9 per cent, and in the last 1,000 cases, .8 of 1 per cent—a result never before approached in the Lakeside Hospital.

Summary.

The brain being a tissue of surpassing delicacy, is damaged with wonderful facility by injury and by fear and worry. The good risk patient when operated by almost any method by almost any surgeon of experience, will recover from his operation, but the delicate nervous organization is only too frequently shattered by the experience. We now understand why. Though the principle is clear, the technique demands to a certain extent a re-education of the surgeon; it demands a certain amount of detail and precision; it demands far more consideration for the patient; but through anoci the destiny of a pa-

tient is to a greater degree placed under the control of the surgeon, who through it is enabled to reduce both the morbidity and the mortality.

THE TREATMENT OF ENDOMETRITIS AND SALPINGITIS.*

By J. Hugh Carter, M. D.
Memphis, Tenn.

It is now considered by our best histopathologists that a true endometritis, meaning by that an extensive inflammation of the endometrium, rarely exists. But we often find an inflamed foci here and there, but these inflamed foci do not seem to affect the endometrium as a whole. In fact, the scrapings from the uterus, in most every case, there is no sign of a true inflammation, but, on the other hand, we find a true hyperplasia. However, this being true, we shall use the term endometritis in this paper, as it is almost universally used. Barbour says: "Thus are we prepared for the modern view that many of the processes which we have to describe under endometritis are more allied to new formations than to inflammation." But some one will say if inflammation is not the cause of the alterations in the endometrium, what is it that causes the benign changes that we find so often in the endometrium?

I shall permit Jesse Macgregor to answer this: In the course of the normal menstrual cycle the uterus passes at stated intervals through a premenstrual period of serous exudation, followed by an intense congestion. During the premenstrual period the capillaries are distended, serum exudes into the stroma, the stroma cells swell up, especially those near the surface, and the glandular epithelium also undergoes an edematous swelling and degeneration. This is followed by a period of congestion and extravasation, when blood also passes out from the capillaries into the stroma and uterine cavity. Should this process be repeated in healthy amount and at normal intervals, the endometrium returns to

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its normal condition in the interval when menstruation ceases.

If, however, there is some steady stimulus which keeps the uterine vessels congested, or should the vessels be diseased, the endometrium does not return to its normal resting condition, but remains congested and edematous in varying degree throughout the resting interval of the cycle." Hence, we may say, anything that interferes with the normal menstrual cycle will cause hyperplasia of the endometrium, as infection following abortion and labor; gonorrhea; mal-positions of the uterus, and lacerations of cervix. To that end I shall classify endometritis as acute and chronic. The pathology is the same in both forms, save the time and the degree of the inflammation.

Symptoms: The patient usually gives the history of a previous abortion or instrumental delivery, and since that time she has had a bearing down or a heaviness in the pelvis and a backache; she also complains of menorrhagia, metrorrhagia and leucorrhoea. When questioned further she will say the pain has been confined to left side in front and just below the kidney, extending along down the inner side of the thigh, and in her back over the sacrum. The pain is worse at the menstrual period, and micturition more frequent. If the condition has gone on any length of time, the patient will look anaemic and complain of weakness and short breath. Examination of the uterus shows it enlarged and some form of erosion of cervix. Schroeder claims the endometritis following abortion is the interstitial type and menorrhagia is the characteristic sign. The interior of the uterus shows inflamed foci, pieces of decidua, or some form of a polypus. The cervix is usually very much enlarged and the os is inverted. In fact, we have an endo-cervicitis. Sometimes we find the uterus down behind the pubes and filling up the pelvis; the fundus forward into the bladder, and the cervix is pressed back to the sacrum. By the examining finger in these cases we find, in most instances, an incomplete involution of the placental site.

Treatment: The treatment will depend upon the direct cause of the endometritis. In those cases following abortion where there is

hemorrhage and subinvolution, or where there is a placental, fibrinous or spurious polypus, these must be detached, and the decidua removed with the enrette. Those following labor and subsequent infection, with displacements of the uterus, if acute, and the uterus is enlarged and down behind the pubes, filling the pelvis; we should insert finger into the uterus and lift it out of pelvis. Dr. Martin, of Berlin, says: "Thus the uterus was always easily raised up. In this way, then, was emptied out of the uterine cavity a considerable quantity of retained blood and lochial secretion. The relief of the patient attained immediately in this way made complete as soon as energetic contraction of the uterus occurred, after appropriate stimulation by ergot and palpation of uterus." The chronic form should be treated with the enrette. Endometritis, with adenoma and erosion, a thorough curettement of the uterus and the puncture of the cervix in a dozen or more places to relieve the congested stage of the cervical glands, will in most cases relieve the condition, even if there is a slight laceration of the cervix. The same treatment applies to the erosion, with the addition of the use of iodine, and tamponing of the uterine cavity and the giving of ergot. The whole object of the treatment is to relieve the subinvolution of the uterus and the diffuse hyperplasia of the endometrium, with drainage of the cervical glands, and to stimulate uterine contraction.

SALPINGITIS: Is nearly always secondary to an endometritis, but may be direct, caused by bacterial infection or menstrual congestion, violent exercise, and taking cold during menstruation. The pathology is the same as in endometritis. There is no difference between the acute and the chronic, save the time and degree of the inflammation. Under certain conditions, salpingitis may become either a hydrosalpinx, haemetosalpinx, or a pyosalpinx. Usually when the inflammation has gone this far, or we doctors have permitted it to do so, there are extensive adhesions taking place between the tubes and ovaries.

Symptoms: Some one has said there are no pathognomonic signs of salpingitis, to which I cannot agree. Heretofore we have

associated overitis and pelvic peritonitis with salpingitis, or, in other words, we were not justified in saying a patient had salpingitis until the symptoms of overitis or pelvic peritonitis had developed. That is, salpingitis had been undiagnosed and untreated, I might say properly, till the above condition had developed. I believe with a complete history as to previous abortion, instrumental delivery, acute or chronic inflammations in adjacent organs, as endometritis and appendicitis, with the patient complaining of dull, often burning, constant, remittent or intermittent pain and local tenderness. The colicky pain about the tubes during or just before menstruation, with intervals of comparative comfort, dysmenorrhea, and often menorrhagia, all these symptoms are increased if the patient is on her feet to any extent or does household work, or if she exercises in any degree.

Bland Sutton says: "Many cases of dysmenorrhea are associated with adenoma of the cervix in women beyond any suspicion of gonorrhea. Several such cases have been placed under my care for the purpose of oophorectomy. On examining the patients the adenomatous condition of the os is recognized, and irregular tender swellings can occasionally be felt on each side of the uterus. When these patients are kept in bed, these tender swellings will subside, and often reappear when the patient moves about. These tender pelvic swellings are in many instances fallopian tubes swollen in consequence of catarrhal conditions of the mucous membranes." In all of these cases, either married or single will complain of pain below the left kidney; and I believe this left-sided pain just below the kidney, often diagnosed as due to a floating kidney, is due solely to swollen condition of the lymphatic glands that drain the left ovary, tube and cervix, and which are situated on the aorta just below the kidney. The pulsating aorta causes the pain. The above symptoms apply especially to the chronic form; but the acute, with or without undergoing suppuration, are the same, save they are acute in character. Finally a careful examination of each patient, by bimanual palpation we can usually trace the tubes from the uterine attachment, and find they are

hard, indurated, enlarged and tender on pressure; a large mass about the middle of the tube indicates a pus tube.

Treatment: The treatment, I believe, becomes more nearly being strictly a medical one than any of the diseases of the generative organs. That is, they should be treated early by the family physician, which should be expectant in nature, absolute rest in bed for the acute form in the recumbent position, hot sterile salt water vaginal douches night and morning, hot or cold packs to lower abdomen, but we should not purge our patients. Codea Sulph. should be given as necessary to keep patient comfortable; no food should be given for the first three or four days, then light diet. If, under this treatment, the inflammation goes on to suppuration, it will become walled off, and then the tube can be removed by the surgeon without any or, comparatively little danger to the patient. Most cases, when treated as above outlined, will recover spontaneously, or the inflamed tube will undergo complete resolution. Salpingitis undergoing suppuration is surgical, and as soon as the symptoms have subsided and the tubes are walled off, they should be removed by the abdominal route, and not by the vaginal puncture. In some instances, where the tube is very low in Douglass' pouch, we may puncture through the vagina for temporary relief, as we know that incising cavities or cysts lined with mucous membrane very rarely heal, but leaves a sinus, therefore necessitating a second operation.

The catarrhal form should be treated as the acute, but not so vigorously with the addition of vaginal tampon of glycerine and ichthyol to be applied each night and removed in the morning. After the symptoms have subsided we should eurette the uterus thoroughly with sharp eurette, and if there is considerable subinvolution, I pack the uterine cavity with iodiform gauze and leave it for three or four days, administering the Fl. ext. ergot ten to twenty M. four times daily. Then, if necessary, continue the douches and tampons for ten days or two weeks. It goes without saying, if there are displacements of uterus or lacerations to any extent of the cervix, these should be attended to. Systemic treatment should be given if necessary, and

all sexual relations should be discontinued for two months at least.

By carrying out this line of treatment, I have cured more than one patient of salpingitis after she had been advised to have her tubes or ovaries removed, and have seen them since become mothers. Therefore I would advise, in all cases, conservative medical treatment before an operation.

To sum up: First, we should get a careful history from the patient; second, make a careful examination; third, make a diagnosis; fourth, thorough medical and hygienic treatment of the acute form of salpingitis; fifth, catarrhal form, which is usually due to some abnormalities of the generative organs, these should be treated, then the salpingitis; sixth, the suppurative form (as pustule) should be operated upon by the abdominal route as soon as the inflammation has subsided.

A DISCUSSION OF A FEW OF THE THERAPEUTIC PHYSICAL AGENTS.*

By J. M. King,

Professor of Dermatology and Electrotherapeutics, Medical Department, Vanderbilt University, Nashville, Tenn.

The outburst of invention and discovery in science of the past ten or fifteen years has brought forth some valuable agents in the treatment of diseases, some of which I wish to discuss, such as the High Frequency Current, X-Ray, Radium, Carbon Dioxide Snow and Pinsen Light. They originated from the side of pure science; but they have been tested now for several years clinically in the treatment of the conditions to which they are applicable in comparison with the older methods, and have been found to give more satisfactory results and consequently are used the world over by competent and reliable members of the profession.

It would be impossible in so short a time to dwell in detail upon each of these agents,

but what I wish to make clear is their relation to each other and their distinctive fields of application. Co. 2 and Pinsen light are used only locally, while the X-Ray and High Frequency may be applied for systemic effects as well as for local effects. To a certain extent in the treatment of naevi, epitheliomata, etc., one may be substituted for the other, yet for definite reasons in any cases, one would be preferable to any of the others. For instance, frequently a patient is referred for the use of one of these remedies as suggested by his physician, but many times the suggestion cannot be accepted, for the agent suggested would not accomplish the purpose so well as one of the others. So I wish to correlate and present the distinctive merits of agents with reference to their local application, and also to call the attention as well to the general effects of the X-Ray and High Frequency.

High Frequency Current.

The High Frequency Current and its therapeutic use are not well known generally. It gets its name from the rapidity of oscillations which takes place in the current. If a Leyden jar is discharged, the spark which manifests the discharge is not made up of an unidirectional flow of electricity, but is constituted of a number of to and fro movements or oscillations of electricity. Now, if two Leyden jars are arranged so as to connect the inner coats with a coil which will charge them, then connect the two outer coats with a wire, the induced current which flows over the wire when the jars are charged and discharged is the high frequency current. The frequency of these oscillations ranges from 500,000 to 1,000,000 per second. The perfection of this current is due to D'Arsonval and Oudin, and there are respectively two different currents. The D'Arsonval coil is the one from which the high frequency current is taken when the bipolar treatment is given as in auto-condensation, etc.

The Oudin coil, or resonator, is a coil of fine wire—one end attached to the end of the D'Arsonval coil, the other end arranged for the attachment of the vacuum or metallic electrode for monopolar application.

Directly to the body the current is applied

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with the vacuum electrodes or with small metallic electrodes, and indirectly by what is known as the auto-condensation pad or couch, which consists of a moss pad or mattress six feet long with a sheet of zinc extending throughout the bottom of the pad. This pad is placed on a table; the patient lies on the pad, holding one terminal of the high frequency coil, while the other terminal is attached to the zinc sheet underneath the pad.

The high frequency current applied locally to the body from the Oudin resonator is stimulating, irritating and escharotic, but when used indirectly from the D'Arsonval coil, it acts as a general systemic tonic.

The spark from a small vacuum electrode or a small metal electrode may be used to remove small moles, flat-warts, small superficial epitheliomata, and to stimulate chronic indolent ulcers. Fulguration is a method of treating cancer with very strong high frequency sparks, the details of which must be omitted.

I have used this current in the treatment of superficial epitheliomata with very good results. One treatment is usually sufficient for these small lesions. Inflammation follows the treatment similar to that of a mild burn and healing follows, leaving a thin scar. Papillomata of the bladder have been successfully removed by the local application through the cystoscope.

The broad vacuum electrode is used as a powerful counter-irritant and local stimulant in such cases as chronic arthritis, or painful muscular or nerve lesions, and in some cases of Neurarthrititis along the spine. The general indications for this current locally with the vacuum electrode are those cases where a very marked local effect is needed on the skin and deeper parts as in chronic neuritis or neuralgia and chronic lumbago and wry-neck.

During the use of this current with the vacuum electrode ozone is generated on the surface and in the skin, and remains on them for several hours, the body absorbs some of the ozone just as it takes up carbon dioxide from the bath. The ozone is bacteriaicidal to a certain extent, and the spark itself is stimulating and for both reasons the vacuum electrode is useful in treating indolent cases of acne.

One of the greatest benefits derived from the high frequency is its effect upon the general system when administered through the auto-condensation pad. Every cell in the body so to speak, is energized by this method. A current of 600 milliamperes with oscillations of 50000 or more per second may be made to traverse the body. In cases of defective metabolism an increased oxidation is produced, the output of carbon dioxide is sometimes increased from 17 to 37 liters per hour, and there may be an increase of heat production from 79 to 127 calories per hour.

The body temperature may rise more than one degree Fahrenheit.

The urine becomes more toxic, and phosphoric acid is increased. In cases of high arterial tension the blood pressure is reduced. Careful observations have been made and reports to the effect that a reduction of 5 to 9 m. m. of mercurial pressure takes place after the first treatment. One writer reports four cases 27-26.5, 20.75 and 26 mm. of mercury respectively reduced to 13.5, 16, 17.75, and 16, and the pressure remained down after the treatments were discontinued. I have treated one case with pressure at the beginning of 240 and now it ranges from 160 to 180 with much improvement in general health and comfort.

Much more could be presented with reference to the general application of the high frequency current to such conditions as diabetes, myxedema, etc., but the time will not permit.

I have used this method in the treatment of several cases of generalized pruritus with some benefit.

X-Ray.

The X-ray in its wide range of usefulness is one of the greatest discoveries of the last century. When it first became known as a therapeutic agent, the profession was at sea as to what conditions it was applicable, and for that reason it was tried for the treatment of many cases in which it failed utterly, but now its limitations are fairly well known. It holds an exclusive place in medicine as much so as mercury, quinine or antitoxin, and to discuss in detail its sphere of application in medicine and surgery would require a treatise

of some length, however, I shall endeavor to present as fully as possible its salient and practical points.

The therapeutic properties of the X-ray are sedative, stimulant, irritant and escharotic. Its sedative effect is demonstrated by the relief from the X-ray in cases of intense local itching, and relief from pain in cancer and neuralgia. The stimulating effect is well known in the treatment of tuberculosis ulcers and sinuses. The therapeutic effect of the X-ray in the treatment of tumors and growths depends upon its specific irritant or escharotic action upon the cells of low vitality which results in atrophy or death and absorption of these particular cells. Epithelial tissue in this respect responds more readily than any of the tissues, and diseased epithelial growth of carcinoma or epithelioma is much more easily affected than normal cells. On the surface an inflammation or dermatitis may be produced by one long exposure or several short exposures to the X-ray, and when the inflammation has healed, there will be left a soft atrophic scar or area. On account of this specific action upon epithelium, the X-ray is most efficient in its applications to diseased conditions of the epithelial layers of the skin and to the epithelial glands of the body.

Malignant Growths.

The X-ray may be applied for three purposes in cancerous conditions:

First, as a destructive and curative agent in superficial epitheliomata.

Second, to retard the growth of inoperable cancers, either sarcoma or carcinoma.

Third, to prevent the return of cancerous development on the surface, after excision.

With reference to the treatment of the first group, I think I can say, without fear of contradiction, that practically all superficial epitheliomata without glandular involvement will yield to the X-ray by the proper management with the exception of those on the lip, mucous membrane of the gland, penis and mucous membrane of other areas. A small epithelioma on the smooth surface of the body may be cured with the X-ray alone, but deeper growths should be curetted, and the X-ray applied to the base, until sufficient dermatitis

is produced. If the growth should be deeper and beyond the destructive effect of the X-ray it should be exercised, and the open wound should receive strong exposure.

Some deep-seated growths in the skin may be removed with the electro-cautery, followed with X-ray exposures allowing the wound to heal by granulation. If the growth is located by the eye, and has penetrated the orbit beyond reach of the X-ray, the ball with the lids should be removed, and the open orbit and the surrounding border should be treated strongly with the X-ray.

Lip cases give more anxiety than any of the superficial variety. The skin and mucous membrane of the lip are so closely associated with the tissue of the lip itself that they are one and the same, and just which case may be treated successfully alone with the X-ray, and which one should be operated upon with after treatment with the X-ray, is a question of judgment. A very superficial growth on the cutaneous margin of the lips will yield to the X-ray alone, but if the mucous membrane is involved, an excision should be done, followed by X-ray. These growths on the mucous membrane will not yield, as a rule, to Radium or to the X-ray. Engman reports one case cured of cancer of the tongue with X-ray, but no microscopic examination was made.

In the treatment of inoperable cases and recurrent cases of the breast, the X-ray is better adapted than Radium on account of the large surface usually involved. The X-ray is better adapted to the immediate after treatment of cancer of the breast than Radium, also after removal of superficial sarcoma. I think every case of cancer of the breast should have a thorough after treatment with X-ray.

Diseases of the Skin.

The area involved in the majority of skin diseases is so large that Radium is out of consideration. The X-ray is helpful as an accessory agent in a number of dermatoses and should be used when indicated. Hypertrophic eczema, some eczemas of the hands, some cases of Psoriasis, Lichen planus, Acne, and Rosacea, are greatly benefited by the X-ray. Ringworm of the scalp should be treated practically altogether with the X-ray. Lupus of

the ulcerating type may be treated with the X-ray until the ulcers heal, then the case should be finished with Linsen Light. However, a great many cases of lupus may be cured entirely with the X-ray alone. The X-ray gives better results in Mycosis, fungoides, than any other agent. In Syecosis of the beard and nape of the neck, epilation with the X-ray and treatment with vaccine and diet produce a cure in the majority of cases.

Leucoplakia of the tongue or lips is very successfully treated with the X-ray.

Blastomycosis yields to the X-ray, but small areas should be excised. Large areas may be curetted and treated with the X-ray. Aggravated Pruritus ani et vulvae, obstinate post-herpes zoster neuralgia, and chronic neuralgia, and lumbago are frequently permanently relieved with the X-ray after other remedies have failed, on account of the sedative influence of the rays.

I wish now to call your attention to some of the deeper seated troubles to which the X-ray may be applied with benefit, such as Tubercular adenitis, Exophthalmic Goitre, Hodgkins' disease, Leukemia, and the Thymus of children. One would naturally at first thought regard this treatment of tubercular cervical glands with skepticism, but the treatment has been thoroughly tested by the ablest users of the X-ray in the world. Tousey states that the glandular mass shrivels and certain glands cease to be palpable, while others remain as innocuous small nodules. Although Tousey is a surgeon, he states that his success by this method leads him to believe that radiation is preferable to surgical extirpation, because this treatment leaves no scar and because it permanently closes certain lymphatic channels and hence tends to protect the patient from general infection.

With further reference to this subject, I shall quote the remarks made by Dr. Pancoast, Professor of Roentgenology of the University of Pennsylvania, at the last A. M. A. meeting, June, 1912. He states the case clearly and conservatively.

"The results in tuberculous adenitis makes this one of the most satisfactory conditions to treat by radiation. A decided skin reaction is essential before sufficient radiation has been applied to exert the necessary degree

of stimulation in healthy tissue or cells, and at the same time a destructive effect on those of lowered vitality, in connection with which absorption must be promoted. The destruction of the organism is accomplished indirectly through the reaction induced in the tissues. General systematic measures and the closing of avenues of infection are most essential as adjuncts to the treatment and in the prevention of recurrence. The treatment should be modified in accordance with three types of cases.

"In the first, with enlargements which formally would have been regarded as having just reached an operable stage, radiation, if properly applied, should be the only local measure required in all instances. The second group includes cases with one or a few very large glands not yet undergoing perceptible caseation. Conservatively speaking, most of these are primarily operative cases, but only the largest glands need be excised, the smaller ones being left to post-operative radiation, thus simplifying the operation and minimizing the scarring. The third group embraces cases which have passed beyond the stage of beginning caseation, and which are primarily operative. Here again post-operative radiation will simplify the operation, and in addition, will promote healing sinuses, and also yield far better cosmetic results by minimizing scar formation or reducing excessive scar tissue."

Two cases of tubercular adenitis referred to me by Dr. E. G. Wood, were treated successfully by radiation. One case had been operated upon by Oschsner of Chicago, with a recurrence within a few months. This patient was very anemic, and had a number of tubercles on the arms and hands, legs and feet, and had glands on both sides of the neck. She has remained well since treatment six years ago. The other patient had two glands on one side, the larger the size of a partridge egg, the other the size of a cherry. She has also remained well since treatment four years ago.

Some cases of Exophthalmic goitre, should have radiation, previous to the operation, when the pulse rate fails to be lowered by rest and indicated medication. I have seen improvement in such cases follow a few radia-

tions, but as a matter of course, advice for such treatment should come from the surgeon in charge.

In Hodgkin's disease, radiation is the only method at present that gives any satisfactory results. In 1907 Pancoast collected reports of forty-four cases, with twenty-five per cent living and well two to four years after symptomatic cure.

Leukemia cannot be cured by radiation, but it will do as much towards prolonging life during a period of comparative comfort as any other therapeutic agent yet employed. The treatment is directed to the marrow of the long bones, the spleen being treated every now and then during the course of exposures, preferably after the leukemia has been reduced to a certain extent.

Recently Dr. Billings, of Chicago, has successfully treated several cases with benzol, which bids fair to displace the X-ray.

Pseudo-leukemia and leukemia are rare, and in my experience I have treated only one case of the former and four of the latter. My results were those obtained in the average cases. I did not complete the treatment of the Pseudo-leukemic case which was one of very extensive involvement, the cervical, axillary, inguinal and abdominal glands being very large. I exposed the cervical glands twice on each side, and they were reduced almost to normal size. Three of the leukemic cases were much improved. The fourth had a valvular heart lesion and chronic nephritis and the ravages of the leukemia were so marked that nothing could be accomplished.

With reference to the Thymus of childhood, it may be stated that the X-ray is so positive and pronounced in its influence upon the thymus that it may be regarded almost a specific for the enlargement in very young children or persistent enlargement in older children. Only a few cases have been treated and all relieved.

Diagnosis.

The value of the X-ray in diagnosis in medicine and surgery cannot be over-estimated. In medicine it is of real diagnostic value, in such cases as pulmonary tuberculosis aneurism, prolapsed, elongated or dilated stomach,

prolapsed colon, kinks or constrictions of the colon.

In surgery it has a wider diagnostic field, as in all forms of fractures, and dislocations, opaque foreign bodies, Potts' disease, calculi of the kidney, ureter, and bladder, osteomyelitis, suppurating frontal sinuses, and the location of unerupted and impacted teeth.

Radium.

The scarcity and high cost of Radium prohibits its general use and the small quantities in which it is usually obtained, restricts its application in a practical way, to only very small lesions, such as small Epitheliomata and Naevi. In its action upon tissue, it is very similar to the X-ray and in a therapeutic sense, it is not applicable to any lesion to which the X-ray is not applicable. In the treatment of Epitheliomata about the eyes, the X-ray may be used with as much ease and satisfaction as Radium, although it is claimed by some that Radium is more easily applied in certain cases. I have treated a number of cases of Epitheliomata on the eyelids, and about the eyes, with ease and satisfactory results. Radium may be applied to cancer of the nasal cavity, of the larynx, or of the rectum, etc., with more ease than the X-ray, but neither would be curative in such cases, and treatment with either one is almost useless except to relieve pain and slightly retard growth of tumor. Radium acts well in the removal of Vascular Naevi, but Carbon Dioxide Snow has now displaced it for that purpose, because Carbon Dioxide Snow is much less expensive, is more active and gives as good results as can be obtained by any means we have in use at present.

Radium does not hold an exclusive position in this field of work of local treatment.

Carbon Dioxide Snow.

Its value is recognized the world over, and its use is more frequent as it becomes better known. It has practically displaced radium in the treatment of flat moles and birth-marks and has displaced the X-ray in the treatment of very superficial epitheliomata, senile keratoses and senile warts. The high frequency spark may be used for senile keratoses as

well as the snow, and with equally as good results in selected cases.

Finsen Light.

The Finsen Light is the best agent yet employed in the general treatment of lupus, although the X-ray has produced many perfect cures.

In conclusion and with reference only to the local application of these agents, it may be stated that all of them are eminently useful and practical, that one may be substituted in a way for another, that Radium is practically displaced by the X-ray and carbon dioxide snow. The Finsen Light has taken the place of the X-ray in lupus. The High Frequency Spark is an excellent stimulant to chronic ulcers and to indolent acne vulgaris. Carbon Dioxide Snow takes the place of the electric needle in the removal of selected naevi and moles.

DISCUSSION.

DR. G. C. SAVAGE, Nashville: Dr. King stated in his paper that the X-ray is not as efficient in the treatment of malignant troubles connected with mucous membranes as it is in treating those connected with the skin. I think in radium we have an agent that has a decided advantage over the X-ray in the malignancy of mucous membranes, and when I say mucous membranes I mean to include the lip and eyelid and the margin of the nostrils where the skin gradually merges into the mucous membrane. I have seen malignant troubles of the eyelid melt away very rapidly under the application of radium. I have in mind a case of a young man with sarcoma of the nasopharynx whom nobody expected to live even after the removal of the sarcomatous mass. During the operation he bled profusely. The best that was promised him, when he went on the operating table, was some little comfort over and above what he had been enjoying for a long time. It is now seven or eight years ago. After the removal of the malignant growth in the nasopharynx radium was used at longer or shorter intervals, and that man today is entirely well.

One other case, almost a copy of this, according to the latest information I received, was getting on very nicely, but whether he has had a complete recovery or not I do not know.

In radium and the X-ray we certainly have two most efficient means for curing malignancy where the disease is at all accessible.

DR. E. T. NEWELL, Chattanooga: One of the most interesting parts of this paper to me is with reference to what Dr. King had to say regarding high frequency in reducing blood pressure. We

are all using blood pressure instruments now so much, and we all have these cases of intractable high blood pressure, where you have interstitial nephritis, where you cannot lower the blood pressure, where the man cannot sleep, and you feel like you have to do something for the patient before he ruptures a blood vessel. If you can lower that blood pressure 30 to 50 points with the high frequency current, then it is certainly a good therapeutic agent. I have a man who has a blood pressure of 265, which is all my instrument will register, and I do not know how much more he has. Nitroglycerin, hot baths, or anything else fails to reduce it. He seems to get along fairly well, but the crisis is coming some day, and if high frequency will do that much for his high blood pressure, it is a good therapeutic agent.

I have used the X-ray very extensively, and I have seen good results in acne combined with the bacterins, and in epithelial growths. I do not think there is anything better than the X-ray in these cases. I do not think you need to fear any burns. I have not excited any inflammation of the skin with the use of the X-ray. If there is glandular involvement, you cannot depend upon the X-ray in these cases, and in cancer of the lip the X-ray is not indicated, because as soon as you get a case with cancer of the lip you must clean out the submaxillary glands. The operation for cancer of the lip should be combined with cleaning out the glands under the inferior maxillary.

As for Hodgkins' disease, I believe that while it may have some temporary effect, my experience has been limited in the treatment of that disease, but somehow I have not much confidence in the X-ray in Hodgkins' disease, especially if it is well developed and has invaded the glands of the groin and in the axilla as well as in the neck.

For tubercular adenitis I believe that the X-ray is better after operation than before it, in that possibly it may have some effect on some of the glands that you could not remove at the operation. I have had the displeasure of having to remove several glands in a good many cases after the use of the X-ray. As Dr. King says, the X-ray seems to shrink them and make them cicatricial, so that they are hard to take out. I do not know of anything harder to tackle than a lot of cervical glands around the carotid artery and jugular vein after the complete and thorough use of the X-ray. It is almost impossible to remove the cicatricial tissue and the tight bands without tearing the vein. As I have said, the X-ray in these cases is better after the operation than before it, for its effect on the glands which we may not have removed. I do not mean to say that it will not in a great many cases relieve and cure these glands, even after you have made what you consider a very thorough operation.

DR. KING (Closing the Discussion): I did not read that part of my paper which pertains to radium. It is the consensus of opinion among those

who have used radium and the X-ray that neither of these agents will take hold thoroughly of the mucous membrane.

With reference to the relative value of radium and the X-ray, radium is a little more easily applied to the nasal cavity or to the rectum or to the nasopharynx, but the X-ray will accomplish everything that radium will. You can make the X-ray more powerful than radium. It is the consensus of opinion that the mucous membrane does not yield readily to radium or to the X-ray, although a few cases have been treated successfully.

With reference to the treatment of cases of cancer of the lip, there are certain cases of the lip that will yield to the X-ray. Dr. Pusey, of Chicago, has treated thirty cases of the lip that have been well from five to eight years without any surgical interference. They were superficial cases, selected cases; but where there is a deep growth in the lip, there is nothing to do but to remove it by surgical procedures. When, however, it is superficial, even if it borders on the vermilion border of the lip, it will yield to the X-ray. I have treated several such cases; some of them have been well for six or seven years.

THE AFTER TREATMENT OF SURGICAL CASES.*

By L. E. Bureh, M.D.

Professor of Gynecology, Vanderbilt University, Nashville, Tenn.

Since the day of Lister surgeons have devoted most of their energies to the perfection of technique, but in recent years the profession has begun to realize the great importance of pre and post-operative treatment. Even at the present time it occasionally happens that a case dies after a perfect operation, due to some carelessness in the post-operative treatment, or to our failure to ascertain before operation some idiosyncrasy of the patient. It behooves us, therefore, to make every effort to save not only ninety-nine out of a hundred, but also the hundredth, and render convalescence so comfortable that patients will not look back on their illness with horror, or describe their terrible suffering to gossiping friends. A careful history should invariably be obtained in all cases that are not emergency ones, including a thorough physical examination, as well as the blood

pressure, the blood examination and urinalysis. All of this takes time, but it is time well spent and it will frequently save us the mortification of a mistaken diagnosis, or perhaps the calamity of an unnecessary death. It is almost criminal to operate on a case of election, without any preparatory treatment and with a hasty examination, simply for the convenience of relatives who are anxious to catch an early train out of the city. An easy convalescence is rendered much more probable by a careful preparatory treatment, during which the surgeon has an opportunity to gain the confidence of the patient and the patient has the opportunity of becoming acquainted with the attendants and nurses and accustomed to the new surroundings. The routine purgation and starvation of patients have not been as satisfactory to me in the preparation for operation as the judicious use of enemas and restricted diet. I permit on the morning of operation a small cup of black coffee or hot broth, which will prevent depression. In my experience with abdominal cases, the intestines are found more flacid and contain less gas after the use of enemas than after purgation. The nurse should be instructed to have the patient use the bed pan in passing off the enemas, so that they may become accustomed to evacuating the bladder and bowel in the recumbent posture. This precaution before operation will prevent much subsequent annoyance and trouble to all parties. The drinking of large quantities of water for twenty-four hours before operation prevents, to a certain extent, the depressing effect of the ether on the kidneys, and in many cases allays the thirst and nausea following the anaesthetic. The routine use of the tooth brush and an alkaline mouth wash before operation renders the patient less liable to an insufflation pneumonia.

The operating table should be well padded, and a cushion to support the small of the back should always be used. The omission of this procedure will invariably cause the distressing backache so often seen after operations, which occasionally persists for a long time. It is the duty of the surgeon to see that the patient is well protected from cold during transportation from the operating room to the bed and that the anesthetist accom-

*Read before Tennessee State Medical Association, April, 1913.

panies and remains with the patient until he is safe in bed and a competent nurse has taken charge. From neglect of this precaution, it sometimes happens that the patient will become thoroughly chilled, which may be "the straw that breaks the camel's back."

Again the patient may be drowned in his own vomit, or respiration obstructed from swallowing of the tongue. The bed should be prepared while the operation is being carried on and hot water bags placed so that the bed will be thoroughly warmed. The patient is put in bed on the back with the head low and the knees flexed and supported by a pillow; a blanket is next to the patient with the hot water bags outside of the blanket, and arranged so as to prevent any possibility of burn from the same. A competent nurse should remain with the patient until he is fully conscious. This step should never be omitted. After they are conscious, a pillow may be placed beneath the head and the blanket removed from direct contact with the body and the upper sheet substituted. If the operation is abdominal in character, and the patient's condition does not demand a special nurse in constant attendance after consciousness has been regained, it is well to instruct them not to get out of bed, or, under any circumstances, to sit up. This may seem a foolish precaution, but at the same time even an intelligent patient, without this warning, may get out of bed to get water or sit up, simply to see if they have the strength to do so. One of the most important things in the management of the after treatment of surgical cases is the control of the visits of anxious relatives and friends. If the case is an abdominal one, they should be firmly, but at the same time, kindly informed that they cannot remain at the bedside or in the room. My practice is to permit the two nearest relatives to go in together, night and morning, and remain for one minute, instructing them to speak words of encouragement. After the crisis has passed and the patient is on the high road to recovery, this rule, of course, is not enforced. I tell the family that the first forty-eight hours is the critical period, and that during that time the patient must be kept absolutely quiet, that any one going in the room runs up the pulse and causes a certain amount of excitement,

and that this, above all other things, must be avoided. This rule I have rigidly enforced, even with young children, and I know of nothing in the after treatment that is of more importance. The patient with returning consciousness usually asks for water, and this request should, in the majority of cases, be granted, for the reason there is always thirst, relieves the dryness of the mouth, stimulates the kidneys, and even if it is immediately vomited, it acts as a gastric lavage, and at the same time gives the stomach something to contract against. Ice is contra indicated, as a rule, for the reason that the cold produces a burning of the tongue and mouth which increases the thirst. There is no reason why a patient should be kept in one position continually. In abdominal cases they are more comfortable on the back or on the side upon which the operation was performed, however, if they desire a change of position, there is no reason why the nurse should not change it for them, and at the same time get the bed clothes straightened out and give the back an alcohol rub, all of which will materially add to comfort. If the semi-circle or exaggerated Fowler position is indicated, see to it personally that there is a true elevation of head, chest and upper abdomen, and that this is maintained, otherwise the nurse puts the patient up, but he immediately sinks towards the foot of the bed, the head being the only part left elevated. If shock is present, Pituitrin hypodermically is indicated. I believe it is superior to strychnine or adrenalin, and it has the additional advantage of being a powerful stimulant to the kidneys, which is something to be considered after any prolonged operation. The drip enema of Murphy is indicated in all cases of shock, hemorrhage or peritonitis, using warm tap water instead of the saline solution.

Trout in a recent paper has demonstrated that plain water is more readily absorbed than saline, and that it does not produce edema, the unpleasant salty taste in the mouth, or the poisonous effect that occasionally follows the use of the saline solution. If the patient is unable to empty the bladder at the end of eight to ten hours, the catheter should be used, and after the bladder is emptied one dram of glycerine containing one

per cent solution of boric acid is injected in the bladder. Its presence will usually enable the patient to void in the future. This simple procedure is advocated by Crandon, of Boston, and I have found it very efficacious. If the pain following operation is severe, morphia is by far the best remedy. It is a drug that is not often indicated, but in some cases its judicious administration will produce results that cannot be obtained in any other way. The high strung nervous patient in most instances will be better relieved by a hypodermic of plain water. It is remarkable to see what a splendid effect this simple remedy accomplishes through suggestion, and it is wise, in the majority of patients, to try it before resorting to morphine. No food of any description should be permitted until the end of forty-eight to sixty hours, beginning first with albumen, animal or raisin broths, beef juice, then if these are well tolerated, buttermilk may be added, and later sweetmilk with lime water. Sweetmilk should never be tried first, for the reason that it is likely to form a curd that will produce distension and vomiting. The patient should be kept on liquid diet for two days and then the diet gradually increased, watching carefully, however, throughout convalescence that they do not eat too much. We must remember that a patient after operation is taking no exercise, that as a rule digestion is below par, that the time for meals is an event of the day to which they look forward and that over-crowding of the stomach can easily occur, and must be studiously avoided. A daily bath is always indicated. For the first two days use alcohol and water, and after this period soap and water. The use of a tooth brush and a mouth wash should be a routine procedure in every up-to-date institution, and the patient, if a female, is materially made more comfortable by combing and dressing the hair daily, and if a male an occasional shave. The bed clothes and linen should be kept spotless, the room always tidy, with an abundance of fresh air in all kinds of weather.

There is no indication in the average surgical case to evacuate the bowels before the third or the fourth day, and this is best done by the use of an enema, injected low and using a small tube with a moderate amount of fluid.

Many patients are very sensitive, and the ordinary rectal tube causes intense pain. In addition to this the long tube will coil on itself adding to the misery of the patient, and at the same time deceives the attendant into the belief that a high enema is being used. The daily use of purgatives is contraindicated, for the reason that it makes the patient quite uncomfortable until the bowels act, frequently producing nausea and vomiting. In addition to this the patient forms a bad habit, for we all know the more often a purgative is used, the less likely in the future is the bowels to move without it. After the bowels have been opened once or twice by an enema, then all that is necessary is on each succeeding day to inject a half to one ounce of glycerine in the rectum, and after using this once or twice at the same time of day, then stop all injections and simply place the patient on the bed pan. In some stubborn cases it may be necessary, after discontinuing the enema, to encourage a movement by gently inserting the tip of the syringe into the rectum and leaving it there for a few minutes. An occasional dose of castor oil, during convalescence, is indicated in those who have been eating indiscreetly, and in those who have a high and long standing condition of intestinal stasis. If for any reason enemas are contraindicated or quite painful, the best evacuant for routine use is one of the preparations of cascara or senna. The profession at the present is divided in opinion in regard to early rising from bed after abdominal section. However, there are a few important conditions in regard to early propping up upon which we are all agreed. It is well known and universally carried out that the aged must be propped up as soon as they have recovered from the anesthetic, otherwise a hypostatic congestion is most likely to occur. Again, in certain operations on the stomach, or where infection is present, the upright posture is indicated. When we get beyond these conditions, with a few minor exceptions, the trail divides; one side claiming that early rising hastens recovery and prevents or lessens the tendency to thrombus, the other side claiming that a more certain and a safer recovery occurs if patients are not gotten out so early. Kelly of Baltimore and Boldt of New York have been the

principal advocates of early rising after section, and they have many leaders of the profession as followers. I have tried both methods, and have never been able to convince myself of the advantages of early rising. In the first place, no wound is sufficiently strong at the end of five to seven days to permit walking about with safety. I grant you that we can suture them so that it may be done in many cases without accident, but at the same time we should remember that it takes a round cell twenty-one days to become a fibrous cell. I do not claim that all cases should be kept in bed for twenty-one days. I merely mention the histological point of a round cell becoming a fibrous cell in this length of time to show that a case that gets up at the end of five days is more likely to open up than one that gets up at the end of ten to twelve days. I am firmly convinced that those cases in females who have had long standing pelvic pathology with unstable nervous systems can only be restored to perfect health by a prolonged rest after operation. The most difficult assertion to contravert is that early rising lessens the danger of thrombosis, and I believe that this is true, but the same may be accomplished by daily massage, without taking the other added risks.

DISCUSSION.

DR. J. A. CRISLER, Memphis: As a rule, in our discussions, we discuss what the essayist did not intend to say, or was not encompassed by the subject of the paper. It happened in this particular case that Dr. Burch has covered the ground completely from my way of thinking; that is to say, he has said exactly what I would have said if I had the power to say it so tersely as he has done. It was my hope that he would enlighten us on one point, and that was, what are we going to do to prevent these cases of acute dilation of the stomach that sometimes follow in the wake of surgery? This paper did not necessarily encompass that. It would be very enlightening to me and to others who have had these misfortunes to overtake them. I cannot see how we can add to the paper, in that it occurs to me every word in the paper has been definitely measured and weighed and every side of the subject balanced in his mind before he gave them to us. There is no discussion I can offer that would add to the beauty and merit of the paper, because it fits my ideas exactly as to how to administer to patients who have had surgery.

DR. JOHN A. WITHERSPOON, Nashville: I

want to congratulate the essayist on two points only. While his paper has correctly covered the subject, as stated by Dr. Crisler, as an internist I have noted two sentences leading towards a dangerous precedent, and one is the tendency on the part of surgeons to get their abdominal cases out of bed and up entirely too soon. There is nothing to be gained, in my judgment, by sending a patient out after an operation for appendicitis or after gastroenterostomy, or whatever the operation may have been, before nature has had time to adapt itself to the new relation and before the conditions of operation for safety have been organized.

The other point I wish to make is with regard to feeding these patients so quickly after abdominal operation. I do not believe it is reason. I do not believe that it is physiologic to crowd in the stomach of any patient large quantities of foodstuffs where interference or disturbance of the peritoneum or gastrointestinal tract has taken place. I have seen great harm produced by the idea of a general diet being given very early after operation. Therefore, I want to say as an internist, having watched both sides of these conditions, having considered the arguments pro and con of early rising after operation and the giving of solid foods, the results will be in favor of leaving the patient in bed the legitimate time for the patients to adapt themselves to the condition and to feed them in a way that nature herself would suggest. No man with a disturbance of the gastrointestinal function can hope to have solid food and the number of foods given by the surgeon of today within the first two days or week after an abdominal operation.

DR. BURCH (Closing the discussion): I want to thank Dr. Witherspoon and Dr. Crisler for their kind discussions.

I should like to say in reply to Dr. Crisler's remarks this is such a vast subject that I made no attempts in the paper to take up the complications following operation. If I had done so, I would be unable to finish the paper within the allotted time.

THE DISPOSAL OF THE DEAD.*

By S. M. Miller, M. D.,
Knoxville, Tenn.

The subject of this paper appears to me a pertinent one to offer, as the trend of medical progress is now largely along the lines of prophylaxis and sanitation.

In ancient Rome, one of the XII Tablets said: "Hominem Mortuum in urbe ne sepelito neve nrito." Whether from sanitary or other

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reasons, burning on the pyre was the established method of disposing of the dead down to the fourth Christian century. In Greece this was the law, except in cases of suicides, persons killed by lightning, and unteethed children, who, on account of some supposed divine objection, were denied the right to be buried. Exceptions to this practice applied to Egypt, where bodies were embalmed; China, where they buried in the earth, and Judea, where they buried in sepulchers. Even the Jews employed cremation on occasions of epidemics, as instanced in the vale of Tophet when the plague prevailed.

"This ancient practice, that of burning, was stopped, and has since been prevented, in great measure, if not altogether, by the Christian doctrine of the resurrection of the body." With the idea that every particle of the material body was to be reconstituted and revived made it desirable to safeguard them in every possible way.

After the reign of Constantine the Great, when the creeds of the Christian church received political recognition, down through the ages to within a near period of the recent past, ecclesiastic dictum dominated the thinking world, even in matters now recognized as purely scientific, and earth burial became general with all peoples holding such faith. Following the fifteenth century, when an influx of ideas from Andalusia, Arabia, and other Sarasenic countries led to a beginning rationalistic interpretation of natural phenomena, when the geocentric concept became weakened by discoveries in astronomy, mathematics and navigation, when the law of the persistence of matter and force worked its way into the minds of a few brave beings, despite the odium attached to thinking, then it was that a way began to be opened for the propitiation of the goddess Hygea by other means than by prayer, the ringing of consecrated bells, the operations of charms and incantations, and the offering of sacrifices. During this long period of time, and even extending well down into the nineteenth century, the disposal of the dead was a religious function, and not a sanitary measure. Even now this practice is not sensibly modified, notwithstanding the numerous objections to its continuance. "The old idea still lingers of bury-

ing bodies" beneath or "within the precincts of a church, in order that the dead might take benefit from the prayers of the living attendants;" of placing them with the head to the west, that at the sound of Moroni's trumpet, they can rise "front face" without the trouble of turning around; of making them the subject of some ritualistic obsequies, more or less connected with the notion of a continued intelligent intercommunication with the living. It is remarkable how tenaciously old customs persist long after all reason for their existence has passed away.

The increase of rural population, the growth of cities, the incidents of war, the better understanding of the nature of disease, the attention now being directed to sanitation, all emphasizing the faults and dangers of earth burial. Cemeteries, now so commonly employed, are, in ultimate resort, but a slight improvement upon church yards, the older custom, and the latter only somewhat better than pit-burial, a procedure still practiced by the Spaniards. They are all but temporary expedients; the soil soon becomes filled with decomposing animal matter, gas levitation contaminates the atmosphere, and drainage percolation is infected with the products of putrefaction. All efforts to prevent such are unsatisfactory. Strong cases and metallic containers only retard the process—the ultimate effect is the same.

The best authorities in sanitary science in England, Italy, Germany, Denmark, Holland, Belgium, Sweden, Norway, Switzerland and our own country are a unit in the opinion that earth burial is a source of danger to the living, even when the most painstaking care is exercised to avoid it, and actively so when all such care is disregarded; and especially so, in the disposition of the bodies of those dying of contagious diseases.

Sanitary reform, in burial, has been opposed by religious prejudice, conventional custom, and the equivocal objection of destroying evidence of crime. Late in the nineteenth century (1874) Sir Henry Thompson strongly advocated a return to the ancient method of cremation, and quickly the suggestion was espoused by such strong thinkers as Ernest Hart, Sherley, Brook, C. F. Lord, Rev. C. Vaysey, Sir T. Spencer Wells of England,

and very many others, equally distinguished, of other countries. The events of the Franco-Prussian War, the military experiments of Sedan, Chalons and Mitz, of burying bodies in quicklime, which were unsuccessful as sanitary expedients, helped to bring the subject prominently before the people. After an exhaustive review of the various plans instituted in different countries, and at different times, to mitigate the dangers of earth burial, the first society in Europe formed for the consideration of this question passed a resolution declaring: "We disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its competent elements by a process which cannot offend the living, and shall render the remains absolutely innocuous. Until some better method is devised, we desire to adopt that usually known as cremation."

The problem for solution is to take a body, one, for instance, weighing one hundred and fifty pounds, and within less than two hours convert it into three and one-half pounds of lime dust, or to place it in the earth to fester away by the slow process of putrifaective decay; to make it the companion of the "small cold worm that fretteth the enshrouded form," and later to become a menace to the living.

Lord Shaftsbury effectually disposed of the objections of the clergy by asking: "What would, in such case, become of the blessed martyrs." The objection of custom, and the sentimental reasons growing out of such, can only be corrected by education. "What intelligent faith can suppose that any doctrine is effected by the manner in which this mortal body crumbles into dust." A knowledge of the composition of the body, of the exact same end, reached by a quick, clean, inoffensive method, in the one case, and the slow, repulsive, unthinkable process on the other, would be sufficient to overcome any measure of prejudice against the former. The reason that cremation might be the means of removing evidence of crime is remote, and under proper regulations, well-nigh impossible. The rules established by the Cremation Society of England, and adopted by similar organizations in this and other countries, so far eliminate this

supposed fault, as to cause it to be said of earth burial, "that it plays into the hands of criminal classes."

The reports of grave robberies, when bodies are taken to extort money from living relatives, the necessity of guarding the tombs of distinguished persons for long periods of time to prevent molestation, and the more common horror of the sepulcher ghoul who supplies the dissecting room markets, are instances in illustration.

Many people suffer a measure of mental unrest over the dread of being buried alive. While this is a remote contingency, to be sure, even so much so as almost to exclude it from dignified consideration, yet with the encouragement of sensational, cheap fiction, an unexpressed dread of such a bare possibility holds a lodgment in minds trained from infancy in the mysticism connected with the lethal moments.

In certain cities in Germany are maintained curious establishments known as Leichenhaus, to obviate the danger of premature interment and to encourage the removal of the corpse as quickly as possible from the dwellings of the survivors. In these a light cord is attached to the finger of the corpse and connected with a bell in the warder's quarters. The slightest movement rings the bell. One revival is reported as having taken place at Frankfort. Mortuaries, to favor the early removal of the dead from the habitations of the living are common in many places in England.

There is an economic side to the old custom of earth burial, especially as a church function. You hear much of the high cost of living; there is a higher cost of dying. The prevailing method of disposing of the dead is a luxury that can be indulged in by the affluent, but for people of limited means is a calamity. Every one of these feels obliged, in some measure at least, to conform to the fashion of the times, and in doing so, involves obligations distressing to meet. A reform, in this particular, while not so vital as the sanitary side of the question, is yet an imperative demand.

Every county and municipality must have a potter's field. This is the very worst of all. Graft and inefficiency and disregard of the

very rudiments of sanitary sense characterize every one put under scrutiny. Our own is probably a fair type. With a growing suburb encroaching upon its limits; with a soil most unsuited for the quick appropriation of decaying animal matter; with graves made for old fruit cans, single, double and numerous bodies, and covered in by a layer of clay measured in inches only. England has a law that requires graves to be dug eight to ten feet in depth, with a superficies of four yards. A recent investigation disclosed that our paupers were enjoying an attenuated covering of four inches of earth, without any superficies to speak of.

On the tombstone of Shakespeare, at Stratford-on-Avon, is inscribed the lines:

"Good friend, for Jesus' sake forbare
To dig the dust enclosed here;
Blest be the man who spares these stones,
And cursed be he who moves my bones."

This sentiment, so universally entertained, of preserving the personal identity of the individual, even in his material particles after death, is effectually defeated in earth burial. Within the observation of almost any one of ordinary life duration, church yards and cemeteries are sure to give place to the developing needs of the community, and the "sweet sleep and calm rest" so fondly coveted are rudely broken; "the restful rapture of the inviolate grave" but a hollow mockery.

The conviction that cremation is now the best known means of disposing of the dead is rapidly gaining favor in every country. With the splendid facilities of modern crematories, incinerations are quickly and inexpensively performed, without any of the repulsive or dangerous features attending burial.

In this connection it may be well to speak briefly of the methods of cremation: The body, preferably clad in a shroud, is placed in a light wooden or paper mache case at the home or other place of preparation, and never afterwards handled or exposed. After being delivered at the crematory it is introduced into a heated chamber registering 2000 Fahr or above. The gases from the body are circulated through a second furnace, where they are entirely changed into other gaseous forms—invisible, purified and odorless. Ninety-

seven per cent of the body is thus, within thirty minutes to an hour, converted into innocuous and inoffensive gas, with a solid residue of three per cent remaining as lime ash. Provisions are made for caring for the unconsumed remains in various ways; in urns, by burial, or otherwise, as suits the peculiar fancy of friends. The cost of incinerating a body is slight. Contracts are let at different crematoria to institutions and municipalities for the cremation of bodies at two dollars each. In connection with some crematoria, however, are elegant columbaria with chapel for funeral services, and urns of various forms and workmanship, beautifully designed and engraved, for the preservation of the ashes of the dead. Niches and lockers are built in the walls, which can be purchased and kept in perpetuity, or rented for a definite period. These conveniences are made for such as can afford extraordinary provisions. The expense commonly attached to cremation varies from twenty-five to fifty dollars. In a columbarium I inspected in California, each room was named for some particular flower, and tinted and decorated in its peculiar tints; a lily room, a rose room, a chrysanthemum room, a hyacinth room, etc., the sentiment harmonizing with the associated beauty of the place.

To give an idea of the growing feeling in favor of cremation as against earth burial, the following statistics will be of interest:

In Italy the first crematory was established in 1869; at the time of this report, 1899, there were 30, with 5,531 cremations.

In Germany the first crematory opened was in 1878. There are now, September, 1907, eighty in number, with 13,514 cremations.

In France the first crematory was built at Paris in 1880; at the time of the report, 1906, there had been 86,962 cremations.

There are crematories also at Ronen, Marseilles, Rheims, and other cities of France, of which I have no data.

Buenos Ayres has a crematory founded in 1844 for contagious diseases, since which time another for the public.

Japan has twenty-two crematories. Calcutta, one opened 1906; Canada, one at Montreal, opened 1905; Switzerland, seven, of which I have no special report.

Denmark, Holland, Belgium, Sweden, Nor-

way are among the smaller countries having crematories.

Great Britain's first crematory was opened 1885, from this time to 1876, a total of thirty-three have been constructed, with 12,364 cremations.

There were thirty-four crematories in the United States, Sept. 1, 1907. The first was at Fresh Pond, N. Y., erected 1885; then followed others at Buffalo, Troy, Swineburn Island and Waterville, N. Y., St. Louis, Philadelphia have one each; San Francisco, two; Los Angeles, three; Boston, Cincinnati, Chicago, Detroit, Pittsburg, Baltimore, Lancaster, Davenport, Milwaukee, one each; Washington, D. C., two; Washington, Pa., Passadena, St. Paul, Fort Wayne, Cambridge, Cleveland, Denver, Indianapolis, Oakland, Cal., Portland, Seattle, one each.

In Boston the substitution of cremation for the Potter's field has long been agitated. In New York the addition to the above statistics, the bodies of emigrants dying of infectious diseases at the quarantine station are cremated, unless upon religious objection on the part of surviving friends against the method.

In one year, 1909, there were 13,000 cremations in Europe.

In four years, ending with 1900, there were 13,012 cremations reported in the United States.

Two features are of peculiar interest in this statistical review: One, that the greater part of this has been accomplished within the past fifteen years, and that of this time no information has been obtainable of the workings of the last five years; the other, that not a single city of our fair Southland is represented in this list. *Quod hoc sibi vult?*

With the physical conditions peculiar to this section; warmth, humidity, and an extended sandy coast line, where bodies have to be entombed above the water level; health resorts, where visiting consumptives and others die in great numbers year after year; with a negro population proverbially too improvident to care for its own dead, the question might well be repeated: Why is it so?

However humiliating the admission, the octopus of tradition has not sufficiently loosened his tentacles; the conventional spirit of obedience to the myths of childhood training has

not been outlived, and the thoroughfare of liberal thought is yet obstructed by the philosophy of medieval seolasticism.

"We build our marble fancies to disguise the terrors of the tomb, but from beneath them float the mephitic gases that waft disease on the wings of every wind to the vitals of living friends." It is sad that the presentation of religion should include an insistence upon dogmas which the first breath of science and sense scatters into attenuated fragments."

The scientific, thinking world is now taking up this sanitary question where it was left by the pagan nations at the fall of the Roman empire. Nearly two thousand years mark a long period in the arrest of sanitary science, but the present is the dawn of another era, and reason now may be expected to bear the torch of future progress.

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DISCUSSION.

DR. A. B. COOKE, Nashville: I think the subject of Dr. Miller's paper is one about which the medical profession might very well concern itself, and by concern itself, I mean adopt an educational attitude towards the public on the subject. We are accustomed to the idea of earth burial and our adherence to that antiquated custom has been largely a matter of sentiment. Our people have been so long following that custom that they are actually deluding themselves at the present time with the idea that they are paying the most pleasant tributes they possibly can to their dead, when if we face the subject squarely we cannot fail to understand that what goes on with our departed dead after burial is about the most repulsive process that we can conceive. It seems to me a paper as carefully prepared as the one of Dr. Miller, if it might be read very largely by the public, would be calculated to do a great deal of good. At the present time preventive medicine is our slogan. Sanitation and hygiene as state problems have come to occupy a place of prominence never before attained by them, and we cannot get away from the conclusion that this matter of earth burial is one of the most important of our present day sanitary or hygienic problems. If we can by some means, in some systematic way, take hold of the idea for ourselves and incorporate it in our teaching, in the educational work we do with the

public along sanitary and hygienic lines, we can accomplish something for the entire people and for the entire country.

DR. DEERING J. ROBERTS, Nashville: We all are personally concerned in the remarks of Dr. Miller. As to one idea that he has brought out in his paper, some will dread being buried alive. If I were to be buried alive, or if I were to be cremated alive, of the two I would far prefer the latter. I have no doubt when the time comes for me to go, I shall go, but it would be a horrible idea for my friends to think that they had with great care placed me in the hands of the grim monster while I was only temporarily in a state of unconsciousness. If I should become alive and conscious, I would also know that I was murdered by my friends. On the other hand, if I am taken to a crematory in an unconscious state and my body incinerated, both my friends and I will know nothing, and "ignorance" will truly be "bliss."

I would further suggest in connection with this subject that this matter has to be one of education, and it will take time to get it placed properly in the hands of the county and State authorities. The State should take care of the dead by providing crematories and of putting dead bodies where they can do no harm. That ought to be done as a State act at the expense of the State. If the surviving friends want to go to additional expense for pomp and splendor, or have memorial exercises afterwards, let them do it. When people are to shuffle off this mortal coil, let their bodies be disposed of in such a way as to do no harm to the living, but let it be done by the State.

I was born and raised in Nashville, but for the last 35 years I have noticed the mortality in the three of our wards which almost surround our old City Cemetery has far exceeded any other wards of our city. Burials still take place there. And while by far the greater number of our dead are interred at Mt. Olivet, Mt. Calvary and other exurban cemeteries, still occasional burials are permitted in this old cemetery, which at one time, even in my time and day, was exurban, but is now within our rapidly extending city limits.

DR. S. R. MILLER, Knoxville: Dr. Miller's paper is a pioneer paper. We should educate ourselves before we educate the people, because this is an educational matter. The question resolves itself into three principal points: First the sanitary features; next, the economic features, and, third, the sentimental or superstitious, for some people are superstitious in reference to burial. Dr. Miller has investigated this subject very extensively, and all must agree with him, from a sanitary standpoint, that cremation is the proper thing. Also, we know from an economic stand-

point, it is much better for the country. Even with cheap earth burial, none are as cheap as cremations in London, where it is only \$5.00 to the administrative authorities for a pauper cremation. I would not want cremation as they cremate bodies in Paris. There you can smell the odors from the crematories for several blocks away, but if you go to a crematory in London, or a crematory in San Francisco, and those are the only ones I have visited, you will find there is no odor from them, and it is the ideal method of disposing of the dead.

DR. MILLER (Closing): This subject is a great sanitary question that physicians ought to consider; the disposal of the human dead and of dead animals. All our dead are placed in the ground to contaminate the soil and atmosphere, and pollute the environments of the living. The bodies of animals are thrown into streams to infect the water we drink.

With the permission of the President and the members, I will read the final clause of my paper rather than continue the closing discussion. This is a part that I especially want you to hear.

IMPORTANT RESOLUTION.

At the annual meeting of the American Association for Cancer Research, May 5, 1913, the following resolution (the report of the Committee on Statistics and Public Education) was unanimously adopted:

It is the sentiment of this Association that:

(1) The present instruction of medical students in the symptoms and early diagnosis of cancer is seriously deficient.

(2) The medical curriculum should include special lectures in the clinical departments dealing specifically with this subject.

(3) The universities should provide competent lecturers in this subject to address the local medical societies.

(4) The associate members of the association should be urged to take up the question of the proper methods of approaching the public on the subject of cancer.

(5) The activities of this association should at present be chiefly confined to the education of the medical profession.

(6) This resolution shall be sent to the deans of the medical schools and the Secretaries of the State medical societies in the United States and published in the medical press.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, Jackson Building, Nashville, Tenn.

JULY, 1913

EDITORIALS**THE CARNEGIE GIFT TO VANDERBILT.**

Anent the controversy between the College of Bishops and the Board of Trustees of Vanderbilt University relative to the acceptance of the million-dollar gift to the Medical Department by Mr. Andrew Carnegie, it is to be regretted that the College of Bishops have seen fit to veto the action of the Board of Trustees in their acceptance of this generous gift which would mean so much to the Medical Department, to Nashville, and the entire South. Medical education in the South has suffered more from the want of capital than from all other causes combined, and now when an opportunity is presented by which our leading Southern Medical University might be raised to the high standards required, complications which seem to have no basis, brought about by the veto of the College of Bishops, will retard its progress for years to come without offering anything to take its place.

The announcement of this gift to the Medical Department of Vanderbilt University was probably the prime reason for the determination on the part of the Trustees of the University of the South not to establish a Medical Department in Nashville, they having realized their inability to maintain a high grade medical college without liberal endowment. We have no regrets over the action of the Board of Trustees of the University of the South, for we have long since been convinced that there were far too many medical colleges in America. We see no reason for the establishment of new ones; but our regret is exceedingly keen over the action of the College of Bishops in obstructing the acceptance by the Board of Trustees of an en-

dowment which of itself would be sufficient to enable Vanderbilt University to rank with the best medical colleges in the country.

Let us hope that there may be some plan devised by which the Board of Trustees and the College of Bishops may come to an agreement and accept this generous gift meaning so much for the cause of medical education.

**MEMBERS AND FELLOWS OF THE
A. M. A.**

At the recent meeting of the American Medical Association in Minneapolis, the House of Delegates adopted the recommendation of the Judicial Council which provides that all members of the constituent county and state associations shall automatically become members of the American Medical Association. Those who are now members becoming fellows. Any member may become a fellow upon application, accompanied by five dollars, which entitles them to the Journal of the American Medical Association. While this appears to be a radical change, it is only so in appearance. For a number of years, since the reorganization of the A. M. A., the House of Delegates selected by the various State Societies have in reality represented an actual membership which consists of all members of the State Societies, but they were not so designated. This change merely recognizes the actual membership of the A. M. A. through its various state and county organizations.

**THE AMERICAN COLLEGE OF SUR-
GEONS.**

There was organized in Washington in May an organization known as the American College of Surgeons for the elevation and betterment of surgery, the granting of fellowships to prominent surgeons and the conferring of a title indicated by the initials F. A. C. S., to distinguish those who in the judgment of their peers are competent to do surgery.

This is something on the order of the Royal College of Surgeons of England; there is also a similar College of Edinburgh and one of Ireland. All of these, however, require certain examinations.

It is probable that the college in this country will ultimately establish a formal examination for the conferring of the fellowship. It will be on a democratic basis with the intent of inviting all of the reputable and accredited men, with a sincere effort to deny recognition to the inferior surgeon and particularly to the dishonest surgeon. One of the strongest tenets of the college will be against the fee divider. He must go. There will be no place in this or any other high class organization for this unjust and debasing practice.

The college is not a teaching body, nor a licensing body, simply one of standardization. All surgeons of established reputation who have been in the practice of surgery ten or more years are eligible, if properly endorsed and are approved of by the Committee on Credentials and passed on by the Board of Regents.

The officers are: J. M. T. Finney, President; W. W. Chipman, First Vice-President; Rudolph Matas, Second Vice-President; Franklin H. Martin, General Secretary; Albert J. Ochsner, Treasurer.

The Board of Regents are: George E. Armstrong, George E. Brewer, Herbert A. Bruce, Fred J. Cotton, George W. Crile, J. M. T. Finney, William D. Haggard, Edward Martin, Franklin H. Martin, Charles H. Mayo, Robert E. McKechnie, John B. Murphy, Albert J. Ochsner, Harry M. Sherman, Charles F. Stokes.

It has been hoped by the promoters of this organization that it will do a great work in the up-lifting of surgery in the United States and Canada.

THE SPIRIT OF THE PHYSICIAN.

The following beautiful editorial appeared in the St. Paul Pioneer-Press during the recent meeting of the American Medical Association in Minneapolis:

THE SPIRIT OF THE PHYSICIAN.

Thousands of men eminent in medicine are now in Minneapolis. The American Medical Association is probably the most wonderful volunteer body in the world. If the same number of army generals were gathered together in one place, curious crowds

would swarm after them, merely to gaze on so many eminent killers. If the same number of financiers of equal eminence were to come here, there would be no counting the crowds that would hang upon their footsteps wherever they went.

The doctors are neither killers nor financiers. They save life. They do it often without hope of pecuniary reward. The altruism of the age is well illustrated in them. The doctrine of service never was better exemplified in the world than by the medical profession today. Why are they not as enthusiastically received as would be as many military captains of high renown? Simply because the idea of service to humanity is not yet quite comprehended; simply because the older trade of taking life still holds more glamor than the newer one of saving life.

The doctors are not inferior in heroism personally or as a class to the soldiers of the world. They take more chances in their every-day practice than ever a general officer of an army encounters. The sacrifices of life and health made by the modern physician in his work for humanity are not less real, only less dramatic, than the sacrifice of life in war.

The doctor will come into his own. His heroism will get its regard. Today he is the representative of perhaps the most highly respected profession in the world. He takes precedence of the lawyer, because he deals with life, while the lawyer deals only in property and in the final test men will give all they have for health.

The most remarkable developments of the profession of medicine and surgery are sealed books to the public. They are not translatable into the vernacular. They are real, and we see the results. We do not know the process. But more remarkable still than all the improvements in surgery, the X-rays and all the germ-fighting discoveries is this vastly greater and more comforting discovery of the spirit of service in the profession itself.

One large-minded, clear-visioned editor, at least, has apprehended the great truth which is the very heart of our profession, and, having apprehended, proceeds to announce it in terms to both stir and inspire us. No true physician can read the editorial without feeling a glow of honest pride and a quickening of his determination to conduct his life work as nearly as possible in accord with the ideals set forth. More frequently expressed appreciation of this kind would do much to encour-

age and ennoble our profession. For, after all, the physician is only human and desire for approval is one of his human frailties.—

A. B. C.

News Notes and Comment

Dr. A. A. Bradley, formerly of Eastland, Tenn., has moved to Sparta, his former home.

Dr. P. A. Tinsley, of Dandridge, Tenn., has returned from Knoxville, where he spent several days with friends.

Dr. C. T. Carroll, Jr., formerly of Johnson City, has moved to Morristown, where he will continue to practice medicine.

Dr. W. L. Tadlock, of Talbots, Tenn., has returned from the Lincoln Memorial Hospital, where he underwent a slight operation.

Dr. B. M. Tittsworth, of Jefferson City, Tenn., attended the meeting of the Southern Railway Surgeons at Old Point Comfort, Va., in June.

The Franklin County Medical Society met for reorganization at Winchester, Tenn., on June 25th, and succeeded in perfecting a live organization with 25 charter members.

Dr. Z. D. Massey, physician at the Tennessee State Prison, recently underwent an operation for appendicitis. We are pleased to report his condition much improved and trust he will soon be out again.

Drs. S. M. Miller and W. S. Austin, of Knoxville, Tenn., attended the Southern Railway Surgeons' Association meeting at Old Point Comfort in June. Dr. Miller stopped over in New York City and Philadelphia for a week before returning home.

Following is the program of the nurses' graduating exercises held at Newell and Newell Sanitarium, June 13th: Music, Patten Or-

chestra; Prayer, Rev. Father F. T. Sullivan; Solo, Walter Heasty, Mrs. B. R. Reynolds; "Getting Together," E. T. Newell, M. D.; Music, orchestra; Awarding prizes, Miss Ellen C. Gallagher, Supt.; Music, orchestra; Presentation of diplomas, E. D. Newell, M.D.; Music and refreshments.

Dr. E. C. Ellett and wife, of Memphis, left the first of July for a summer abroad.

Dr. W. T. Robinson, of Shelbyville, has accepted contract work at Hales Bar, on Tennessee River improvement just below Chattanooga, for the coming year.

Dr. J. L. Haywood, of Columbia, Tenn., was thrown beneath his automobile, while returning home from a call June 2nd, and was killed. Dr. Haywood was 40 years of age, and one of the most prominent physicians in Maury County. He was a member of both the State and County Societies.

MARRIAGES.

The marriage of Miss Mayme McCall Young, daughter of Dr. and Mrs. J. C. Young, of Martin, Tenn., to Mr. Robert N. Chenault took place at the home of the bride, June 26.

The marriage of Miss Wilhelmina Litterer, sister of Dr. Wm. Litterer, of Nashville, to Mr. H. M. Rhea, of Somerville, Tenn., took place at the home of the bride June 11th.

The marriage of Dr. H. S. Shoulders, of Castalian Springs, Tenn., to Mrs. Ara B. Jer-nigan, of White House, Tenn., took place at the home of the bride June 6th.

The marriage of Dr. Jas. Leslie Bryan to Miss Neina Bullington, both of Nashville, was solemnized at the Immanuel Baptist Church of Nashville, June 26th.

The marriage of Dr. Jesse J. Cullings to Miss Bessie Westbrook, both of Memphis, occurred July 9.

County Society Proceedings

DAVIDSON COUNTY.

June 3, 1913.—The Academy was called to order by the President at 8:05 p. m., the following being present: Harbin, Sharber, Savage, Cooke, Goodwin, Mitchell, Duncan Eve, Sr., Owsley, Witt, Bloomstein, Smith, R. A. Barr, Harris, Campbell, Eggstein, Jones, Oliver, Nichol, O. Bryan, Shoulders, J. Wither-spoon, L. Caldwell, Floyd, Oughterson, McCabe, Hatcher, Overton, Bromberg, Dixon, Pollard, Pickens, Duncan Eve, Jr., Tigert, and visitors. The minutes of the previous meeting were read and approved. Upon vote the following doctors were elected to membership: Harlin Tucker, Chas. B. Crittenden, J. T. Watkins and W. B. Ward. The changes in the Constitution of the Academy as recommended by the committee appointed for that purpose were adopted as recommended by motion of Dr. McCabe. The committee appointed to investigate the power of the Board of Trustees of the Academy as to the disposition of certain funds in their possession, and of which Dr. Harris is Chairman, asked for further time to report. This was granted by the Chair.

The essay of the evening was a special address by Dr. Perry Bromberg on "Psychical Impotence."

Dr. Bromberg reported a case and exhibited specimens from post mortem of same. This was a negro man, aet. 41. The family history was negative, except that three sisters had died of t. b. The patient had pneumonia 15 years ago and malaria several years ago. His complaint, which began five weeks before first seen, were: nausea and vomiting, which lasted one-half a day, and frequent and painful urination. The temperature and pulse were normal. The patient had hemorrhoids and upon rectal examination he found a large mass in the region of the prostate, which was taken to be an enlarged prostate. The diagnosis of enlarged prostate with acute exacerbation was made. Sedatives were administered, but the patient continued to suffer and he was sent to Vanderbilt Hospital. His temperature remained sub-normal during his stay there. The examination of the urine revealed

a moderate amount of albumen with phosphate and urate in the sediment. A sub-cutaneous tuberculin test was made, but the patient died on the third day. At post-mortem the right kidney was very much enlarged and contained caseous masses. The left kidney was like the right, but smaller. Both ureters were greatly enlarged and resembled small intestines. On opening the bladder a quantity of pus escaped from a cavity just behind the urethra. The bladder had an hour-glass contraction, and in each compartment there was a stone completely filling each division. The stones were joined together. The right supra-renal capsule was apparently tuberculous. The descending colon was very much distended for five or six inches above the sigmoid. Dr. Cooke, who was present at the necropsy, emphasized the interesting points of the case, viz: symptoms referable to the bladder being of only five weeks' standing, the large size and rather peculiar shape of the stone, the mistaking of the stone for enlarged prostate, and the large size of the ureters. Dr. Cooke said there were a great number of enlarged mesenteric glands.

Dr. Litterer asked if the ureter was dilated or if there was any fibrous thickening; also, if there was any hydronephrosis present. He said dilatation of the ureter was common with hydronephrosis.

Dr. Witt asked if the presence of hemorrhoids have any bearing on the hypertrophied prostate. He believed that the hemorrhoids were due to the strangury.

Dr. R. A. Barr reported the following case: Mrs. C., white, aet. 27, married 7 years. One child 6 years old. Three years ago had to have a pregnancy terminated at about six weeks on account of vomiting. May 1, 1913, missed her period and immediately began vomiting was not able to retain anything on her stomach, and about ten days later the uterus was dilated and enretted. Nothing was found in the uterine. She had no bloody flow after the enrettage, but her vomiting was relieved to a great extent. She still vomited occasionally, however. Since her period in April she has not had the slightest flow to this date, June 3rd.

At 4 a. m., May 23rd, she had abdominal cramps felt all over the abdomen. At 4 a. m.,

May 25th, she had a similar attack. She vomited with both attacks and thought they were digestive. On May 26th, at 11 p. m., she had intense abdominal pain and fainted. Her physician found her profoundly prostrated. Under morphia and stimulation she reacted and had no more severe pain, though she felt distended and uncomfortable, and was very tender. The patient was brought to me at 9 p. m., May 27th. She was very much prostrated, but not suffering. She was very pale and had the appearance of acute anemia. The abdomen was quite distended, but not particularly tender except in the left iliac-fossa. Vaginal examination showed a floating uterus, but no great tenderness. Piano percussion seemed to show dullness in the left flank. At consultation with Drs. Witt and Bailey of this city and Dr. Blanton of Union City, a diagnosis of ruptured extra-uterine pregnancy was agreed upon and immediate operation advised.

Operation was performed at 11 p. m. A quantity of blood was found in the abdomen and the left tube was found to be ruptured near its fimbriated extremity. The tube was very small and unchanged to the naked eye except for the lacerated wound. Any enlargement had been blown away in the rupture.

The interesting features in this case are: the persistent vomiting associated with pregnancy near the distal end of the tube; the fact that the vomiting was relieved to a great extent by dilatation of the cervix uteri; and the further fact that there was no bloody flow from the uterus at any time, not even following the curettage. Another somewhat unusual feature was the slight tenderness present at the time she reached my infirmary, less than twenty-four hours after the serious rupture. There was also present quite an unusual amount of gaseous distention of the bowel.

Dr. Witt, in discussing this case, said the peculiar circumstance of curetting this uterus and getting nothing should have led to a suspicion of extra-uterine pregnancy. As to percussion in the flanks, especially of the piano type, is of very little value. Ordinarily he pays no attention to this dullness unless it is found in the iliac regions.

Dr. Barr talked on the relation of dullness to the presence of fluid in the abdomen, stat-

ing he was able to determine the presence of fluid in the abdomen more by "piano percussion" than by the ordinary methods.

Dr. Lucian Caldwell reported a case of ruptured urethra in a negro section hand. There was profuse hemorrhage, and although the patient refused to be removed to an infirmary, he was improving under the care he was able to give him at the camp.

Dr. Bromberg spoke to the point of controlling hemorrhage from a ruptured urethra with especial reference to introducing a catheter and binding the penis around it. The Academy adjourned at 9:45 p. m.

June 13th, 1913.—The regular meeting of the Academy, in the Tulane Assembly Room, was called to order at 8:20 p. m. by the Vice President, Dr. Duncan Eve, Jr. Those present were J. A. Witherspoon, Glasgow, C. F. Anderson, R. Caldwell, Goodwin, Savage, Harrington, Cowden, Campbell, Hill, Sayers, Floyd, Oliver, J. Witherspoon, H. Tucker, Ward, Oughterson, Shoulders, Eggstein, Sharp, Ezell, T. Briggs, Dixon, Jones, McCabe, Tigert, L. Caldwell, Billington, Litterer, Pollard, Sharber, Pickens, O. Bryan, Fort, Walsh, Schell, Neil, Leonard, Bromberg and W. B. Anderson. The minutes of the previous meeting were read and approved. Dr. Tigert moved that the privilege of the floor be extended to Dr. Burger of McMinnville, Tenn. Carried. Dr. McCabe, seconded by Dr. Tigert, moved that the committee composed of Drs. Harris, Billington and Hibbett, who were appointed some time since to look into the matter of the power of the Board of Trustees of the Academy in disposing of certain funds in their possession, and which committee had not reported, be discharged. Lost. Dr. J. A. Witherspoon suggested that the Secretary take this matter up with this committee and urge them to make an early report.

The essayist of the evening not being on hand, case reports were called for. Dr. J. A. Witherspoon reported a young lady who began having nocturnal epileptic seizures at the age of 13. She is now 17 years old, and during that interval has been treated with bromides, etc. Physical examination was negative. She was sent to Dr. Savage for examination and treatment, if necessary. Dr. Sav-

age operated, giving relief. Dr. Witherspoon spoke of the possibility of many of these cases being reflex.

Dr. Savage stated that he believed that the case reported by Dr. Witherspoon would get well. Dr. Savage then reported a case of epilepsy in a young man who had a high degree of hyperopia and esophoria. These were corrected with lenses. The patient was not told that it was intended that this procedure would relieve his epilepsy. All medicines were withdrawn and the patient ceased to have attacks. Later he left off the glasses and the epileptic condition recurred. An operation was performed, completely curing the muscular disorder and the attacks cleared up. Later the patient was accidentally drowned while in swimming. Dr. Savage stated that the case referred to by Dr. Witherspoon had a high degree of esophoria with a lesser degree of hyperopia. A partial tenotomy of both internal recti was done at the same sitting.

Dr. Tigert suggested that the case of Dr. Savage's who drowned might have had an epileptic seizure while in the water, and if he had had his glasses on he would not have had this attack which caused his death.

Dr. J. A. Witherspoon spoke further on epilepsy; of the extreme bromism the patient he reported had been subjected to; the queer expression about the eyes of the patient; of the relief after Dr. Savage's operation, both of appearance of the patient and her feeling; and urged the necessity of looking for the causative factors in epilepsy.

Dr. Savage reported another case first seen in 1897; an epileptic whose attacks increased in severity until it became necessary for his two brothers to remain at home to attend him during his attacks. The patient had one or more attacks daily. He had hyperphoria, 2 degrees of upper tendency of recti. The focal condition was normal. The patient also had phimosis, but this was never relieved. Dr. Savage doubted if anything could be done to relieve this patient, but his eye condition was attended to and for ten years the patient never had another epileptic attack. Since that time the patient has not come under observation. Dr. Savage said he had not relieved all cases of epilepsy that have come

under his care, and that all cases of epilepsy are not amenable to his line of treatment, but that all sources of irritation should be removed.

Dr. Harrington reported a case of epilepsy in a woman thirty years old.

Dr. Cowden reported further on a case of headache, stating that she has had three attacks since the last report. He also reported a woman of 58 whose previous health had been excellent. She reached the menopause at 50. One year ago she noticed an enlargement in the left side, of gradual growth. A diagnosis of fibroid was made. There was some staining. Three months ago this enlargement began to grow rapidly. The lymphatics in the groin and axilla enlarged. There was free fluid in the peritoneal cavity. Operation: The left ovary was large and cystic; right ovary was also enlarged and cauliflower-like. There were some excrescences floating in the fluid in the peritoneal cavity. Both ovaries were removed and a pedunculated fibroid was removed from the fundus of the uterus. Dr. McCabe asked the character of fluid in the cysts. Dr. Cowden replied that the fluid in the left cyst was amber-colored; that in the right, yellow and gelatinous-like. The fluid in the peritoneal cavity was reddish.

At this juncture, Dr. W. G. Bryan, of Albuquerque, N. M., the essayist of the evening, arrived and delivered an address on "Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis."

Case reports were then resumed and Dr. Pollard reported an appendiceal abscess in a girl of 17 years. Three days previous to operation she complained of slight pain in the right upper quadrant of the abdomen, which became worse. When seen she had temperature of 103.6 F., pulse 120, respiration 56. The abdomen was rigid and distended, and there was marked tenderness over the liver. A right rectus incision was made. The intestines were very much injected, and on tracing the white line of the colon upward, a mass was discovered under the liver. This was broken into and pus appeared. Two fecal concretions were removed and drainage instituted. The points of interest were, first, that the high position of the appendix was probably due to faulty rotation of the colon; sec-

ond, that the patient is recovering, contrary to opinion.

Dr. McCabe discussed Dr. Pollard's case, referring especially to the rotation of the colon.

Dr. Cowden reported another case similar to the one reported earlier in the evening, this one differing, however, in that there was no lymphatic involvement, and that there was no fibroid. He stated that he believed that he had added a year to these patients' lives.

Dr. McCabe spoke on malignant papillomata and their virulence, especially if spilled in the peritoneal cavity, and stated that he believed that Dr. Cowden had shortened his patients' expectancy, instead of increasing it.

Dr. Bromberg reported a case of Addison's disease. A white man of 32 years, whose family and personal history were negative, except that he had a bone-felon and a gland removed from his neck some time ago. Did not know whether this gland was tubercular or not. Six months ago this patient had a pharyngeal infection with such severe pain in the back of the head that meningitis was suspected. This confined him to his bed for ten days. After this attack the patient's friends noticed he was very much bronzed and discolored. Five days ago he was seen by Dr. Bromberg, having gone home on account of weakness. Upon examination he was found to be very asthenic, pulse very weak, and was typically bronzed, particularly on the exposed surfaces, moles and warts. The buccal mucous membrane was bronzed. His blood pressure was 100. Blood examination showed 5,000,000 reds, 92 per cent hemoglobin, 7,000 whites. There was an enlargement in the abdomen which was taken to be spleen. The patient died one week from the time he went to bed. Dr. Bromberg spoke of the possibility of any relationship between the tonsillar infection and the onset of the Addison's disease.

Dr. J. A. Witherspoon said he didn't know the cause of Addison's disease, and it would be difficult to say whether the tonsillar infection caused the changes in the supra-renal glands and the sympathetic ganglia of the abdomen or not. In this case the pigmentation might have followed some type of infection. He stated that Dr. Bromberg's case was

rather rapid for Addison's disease, and that the possibility of some type of infection should be considered.

Adjourned at 10:05 p. m.

June 17th, 1913.—The Academy met in regular weekly session at 8:10 p. m., with the President, Dr. Olin West, in the chair. The minutes of the previous meeting were read and approved. Those present were: L. Caldwell, Crockett, Sullivan, D. J. Roberts, Larkin Smith, Pickens, Eggstein, Walsh, Mitchell, Keller, Simmons, Dabney, Hibbett, O. Bryan, DeWitt, Hill, Nichol, Harris, Sharp, Pollard, Billington, Duncan Eve, Jr., Cayce, and J. Witherspoon.

Dr. Harris, as chairman of a certain investigating committee, asked for further time so as to get legal opinion as to the questions involved. The Chair granted him further time.

The essay of the evening was by Dr. Andy Eggstein, his subject being: "A Practical Review of the Serum Reaction of Syphilis." Dr. Jack Witherspoon, who was scheduled to open the discussion, complimented the essayist on his very complete and practical paper, and stated that, like the essayist, he was in favor of the Noguchi reaction, and that the large laboratories of the country have abandoned the original Wasserman and are using the Noguchi modification. He emphasized the fact that a negative reaction does not mean negative syphilis, as even slight anti-syphilitic treatment, allowing the blood to be tested to become hemolized or infected, or getting the blood too early in a suspected case may give a negative result. As to the amount of blood necessary, one or two c. c. is all that is required. He emphasized rigid asepsis in obtaining it and recommended a sterile, dry, Luer syringe for the purpose. He emphasized the great importance of this reaction in diagnosing tertiary lesions.

Dr. Hill called attention to the fact that a plus two reaction does not always mean syphilis, since he had seen a report of four fatal cases of diabetes give a positive Wasserman, and these cases were not considered syphilitic.

Dr. Gallagher called attention to an easy and efficient means of collecting blood for

this test. A constriction is placed about the arm so as to dilate the superficial veins at the bend of the elbow, but not obliterate the pulse. Tr. Iodine is painted over one of these veins and a dry, sterile needle is plunged into one of these veins in the opposite direction to the flow of blood. The blood is collected in a sterile test tube. Any desired amount can then be obtained.

Dr. Eggstein, in closing, laid great stress on the importance of asepsis in collecting blood. He stated that in any stage of syphilis the Wasserman may be negative, so a negative reaction does not necessarily say the patient hasn't syphilis, and if the clinical evidence points to the contrary, another test should be made. He favors the Noguchi on account of its simplicity and the fact that it is being used in the army and navy as well as in other efficient laboratories. In regard to a positive Wasserman in diabetes, he said this was so in the terminal stages and an explanation of this might be found in the fact that the acetone and oxy-butyric acids found in the blood of terminal diabetes may cause the reaction, since the Wasserman test is a reaction for lipoids and not for antibodies. He said a positive Wasserman may be obtained at the height of the fever in scarlet fever, as well as in many tropical diseases.

Under the head of case reports, the following was presented by Dr. Larkin Smith: "The case I wish to report was seen through the courtesy of our Secretary, Dr. J. F. Gallagher. A German woman of 67, aged for her years. She had been under Dr. Gallagher's care for a Colle's fracture and a fractured hip. She was also suffering from heart trouble, which Dr. Gallagher kindly allowed me to look over.

To me the interesting feature of the case was the number of different abnormalities presenting in her heart. Upon viewing her she showed general anasarca, which included the lower extremities and walls of the abdomen and chest. She was cyanotic and markedly dyspnoeic. Visible pulsation of carotids, brachials and jugulars. Palpation located the apex impulse in the sixth interspace in the anterior axillary line and a systolic thrill over the upper part of the sternum and second right interspace. The arteries were hard

and tortuous. The radial pulse was about 48, with occasional premature beats (as shown in the sphymogram "A"). The other sphymograms clearly show sustained pressure at the top of the wave. Percussion elicited dullness from the point of the apex impulse across to one-half an inch to the right of the sternum. Auscultation revealed a distinct systolic apical murmur, transmitted well around the left side. A systolic murmur with p. m. i. in the second right interspace and transmitted up the neck. A diastolic murmur, replacing the second sound, with p. m. i. about the middle of the left margin of the sternum. Blood pressure, systolic, 180; diastolic, 75. While the radial pulse and apex beat, as stated, was 48 to the minute, the jugular pulse was regular and exactly twice that number, 96, per minute. A two-to-one ratio. From these symptoms and physical signs, I concluded that she probably had: first, an aortic insufficiency and stenosis, followed by a relative or secondary mitral insufficiency, and later, with the advancing dilatation, a relative or secondary tricuspid insufficiency, and in addition to these, a two-to-one partial heart-block."

Dr. S. S. Crockett complimented the accuracy of Dr. Smith's report, and stated that he had seen only one case of heart block, this following a surgical operation. He asked for the latest opinion as to the cause of heart block.

The Chair thanked Dr. Smith for his thorough report of this case, and expressed the wish that more members would present more cases that had been thoroughly worked out and written before presenting.

Dr. DeWitt reported a case of gall-stones operated upon under local anaesthesia, a 1-5 of 1 per cent cocain solution being used. Several large gall-stones were removed with little or no pain, and, all told, 1-4 grain of cocain was used.

Dr. Mitchell asked if Dr. DeWitt infiltrated the tissues or blocked the nerve trunks leading to this area. Dr. DeWitt replied that he infiltrated the tissues.

Dr. Walsh stated that in his experience the procedure of Dr. DeWitt was unique.

Dr. Cayce reported having seen three mas-

toids done under cocaine. The Academy then adjourned at 9:20 p. m.

J. F. GALLAGHER, Secretary.

BEDFORD COUNTY.

The Bedford County Medical Society met in regular session June 19, and was called to order by President Dr. T. H. Wood, of Bell-buckle. Following members were present: Drs. Shelton, Patton, Woods, S. S. Moody, Coble, Reagor, Ray and ex-Dr. Frierson, who is a member yet of Bedford County Society, as a visitor. Dr. Shelton reported a case of gastro-toxic fever, which resulted in death. Dr. E. W. Patton read a paper on "Dysentery," which was discussed by Drs. Reagor, Ray, Moody, Woods, and closed by author of paper.

Dr. S. S. Moody was appointed on Essay Committee in place of Dr. W. T. Robinson, who is temporarily out of the county for the next twelve months.

No other business for this meeting adjournment was taken. Next regular meeting will be July 3, Thursday.

F. B. REAGOR, Secretary.

JACKSON COUNTY.

The Jackson County Medical Society met in Gainesboro, Monday at 1 p. m., June 16th. Owing to Dr. J. B. Hix, our former President, having tendered his resignation on account of bad health, Dr. J. T. Conditt was put in nomination for President to fill out the unexpired term of Dr. Hix. Dr. Conditt was elected unanimously. On roll call the following doctors were in their seats, viz: Drs. Jones, Quarles, Clark, Conditt, White, Cornwell, Mabry, S. B. and C. C. Fowler, Gow, Reeves, Anderson, and visiting, Dr. M. N. Alexander.

Minutes of the May meeting were read and approved. Dr. M. N. Alexander, of Carthage, Smith County, was tendered all the courtesies of the Society. After quite a number of interesting case reports and some lively discussions, Dr. O. M. White, one of Jackson County's physicians, who visited the Smith County Society at their May meeting in Carthage, read a paper on "The Personality of a Physician," and gave an account of his visit to

Carthage and the royal reception that he received at the hands of the medical profession of Smith County.

Smith County doctors, I suggest that the next visit Dr. White pays you, that you not be quite so profuse in your hospitalities, lest you steal Dr. White from us—"a hint to the wise is sufficient." No one wants to be prosecuted for theft.

Dr. M. N. Alexander's paper on "Success" was a marvel of literature, indeed, and all the members of our Society pronounced it as such, and what we say is so.

Brother Smith County M. D.'s, send us another man to read a paper to our Society; we want every doctor in Smith County who can write like Dr. M. N. A. to read us a paper, and we will send a man to read them one for each man sent in return.

C. E. REEVES, Secretary.

WHITE COUNTY.

The White County Medical Society met in regular session Thursday, June 12th, with thirteen members present. Dr. S. S. Marchbanks was elected to membership; he is a graduate of Vanderbilt University of this year and a fine fellow, and we believe he is a great acquisition to the medical profession of White County. We bid him welcome.

Dr. J. R. Gott read a most interesting paper on "Syphilis," which elicited a lively discussion and was enjoyed by all present.

A number of very interesting cases were report and the meeting was enjoyed by all present.

White County is enjoying unusually good health just now. There are no epidemics of any kind.

A. F. RICHARDS, Secretary.

ROANE COUNTY.

The Roane County Medical Society met in regular session at Harriman at 1 p. m. on June 16th, Dr. G. C. Givan, President, in the chair.

The following members were present: J. J. Waller, Oliver Springs; John Roberts, G. P. Zirkle, Kingston; E. S. Phillips of Rockwood; G. C. G. Givan, J. B. Goodwin, H. M. Carr and W. W. Hill, of Harriman; also Drs. W.

H. McNutt and Geo. F. St. John, non-affiliating members, were present.

Drs. J. J. Waller and John Roberts reported cases, which were largely disussed.

The following papers were presented: "Tuberculous Meningitis," by Dr. J. E. Nelson, and "Acute Nephritis," by Dr. G. P. Zirkle. These papers were able and interesting, and were freely discussed by those present.

By an almost unanimous vote, the Society defeated a motion to adopt the Medical Defense plan of the State Medical Association.

W. W. HILL, Secretary.

JEFFERSON COUNTY.

The Jefferson County Medical Society was called to order at 10 a. m., June 3rd, by the President.

Clinic by Drs. Cline and King, which was disussed by all present.

The Medical Defense Resolution was disussed by Drs. Duke, Tadlock, King, and others, and was laid over for the next meeting.

Society adjourned until 1 p. m.

Meeting was called to order at 1 p. m. Dr. Tadlock presented a most interesting paper on "Anatomy of the Female Pelvis," which was discussed by Drs. Roberts, Brown, King and LeQuire. Dr. King presented a paper on "Colles' Fracture." This paper was discussed by Drs. Dukes and Roberts.

The following subjects will be presented at the next meeting of the Society: "Mechanism of Labor," by Dr. Dukes; "Pathology of the Lying-in-State," by Dr. Huggins.

The Society adjourned at 3 p. m.

DR. WALKER, President.

DR. H. L. Tar, Sec'y pro tem.

WILLIAMSON COUNTY.

The Williamson County Medical Society held an unusually interesting meeting at the regular meeting on June 10th. There was a good attendance, and Dr. W. W. Graham read a most interesting paper on "Uterine Fibroids," reporting a case in which a diagnosis of tubal pregnancy with rupture was made by the attending and several consulting physicians. The patient was operated on for the relief of this suppressed condition by Dr.

Chas. Mayo at St. Thomas Hospital, when a normal pregnancy with uterine fibroid was discovered. The abdominal opening was closed without removal of tumor, abortion occurring on the fourth day afterward, the patient subsequently making a satisfactory recovery.

Dr. Graham's paper was fully discussed by all members present.

Dr. Dan German was selected to read a paper at the next meeting of the society, subject being "Placenta Previa." Dr. B. T. Nolen will open the disussion.

Dr. G. M. Buchanan was duly elected a member of the society. The next regular meeting will be held Tuesday, July 15th.

K. S. HOWLETT, Secretary.

Book Reviews

BOOKS RECEIVED.

THE PRACTICAL MEDICINE SERIES. General Surgery. Vol. II., Series 1913. Under the General Editorial Charge of Gustavius P. Head, M. D., Professor of Laryngology and Rhinology, Chicago, Post-Graduate Medical School; Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Edited by Jno. B. Murphy, A. M., M. D., LL. D., Professor of Surgery in the Northwestern University, Attending Surgeon and Chief of Staff of Mercy Hospital, Wesley Hospital, St. Joseph's Hospital and Columbus Hospital, Consulting Surgeon to Cook County Hospital and Alexian Brothers' Hospital, Chicago, Ill. The Year Book Publishers, 327 LaSalle St., Chicago.

MASSAGE. Manual Treatment, Remedial Movements, History, Mode of Application and Effects; Indications and Contra-Indications, by Douglas Graham, M. D., Consultant and Instructor in Massage, Boston, Mass.; Member of the American Medical Association for the Advancement of Science; of the American Medical Association; the Massachusetts Medical Society, etc. With a chapter on Massage of the Eye by Dr. A. Darier, Paris, formerly President of the Ophthalmological Society of Paris; Chevalier of the Legion of Honor, etc. Fourth edition, revised and enlarged, with 75 illustrations. J. B. Lippincott Company, Philadelphia.

DISEASES OF THE EAR. By Philip D. Kerison, M. D., Professor of Otology, New York Polyclinic Medical School and Hospital; Junior

Aural Surgeon to the Manhattan Eye, Ear and Throat Hospital; Aural Surgeon to the Willard Parker Hospital for Infectious Diseases, and to the Polyclinic Hospital; Member of the American Laryngological, Rhinological and Otological Society; of the American Otological Society, and of the New York Otological Society and the New York Academy of Medicine. 331 illustrations in text and two full pages in colors. Price, \$5.00. J. B. Lippincott Company, Philadelphia.

VACCINE AND SERUM THERAPY. Including also a study of Infectious, Theories of Immunity, Specific Diagnosis and Chemotherapy. By Edwin Henry Schorer, B. S., M. D., Dr. P. H.; formerly assistant Thomas Wilson Sanitarium for Children, Mt. Wilson, Maryland; assistant Rockefeller Institute for Medical Research, New York City, and at one time member of the Faculty of the University of Missouri, of the University of Kansas, and the Department of Preventive Medicine and Hygiene of Harvard University. Second revised edition. Price, \$3.00. C. V. Mosby Company, St. Louis, Mo.

THE MEDICAL EPITOME SERIES. Practice of Medicine. A Manual for Students and Practitioners. By Hughes Dayton, M. D., Associate Attending Physician, New York Hospital; formerly Instructor in Physical Diagnosis, Cornell University Medical School, New York. Second edition, revised and enlarged. Lea & Febiger, New York City.

THE NARCOTIC DRUG DISEASES AND ALLIED AILMENTS. Pathology, Pathogenesis and Treatment. By Geo. E. Pettay, M. D., Memphis, Tenn., member Memphis and Shelby County Medical Society, Tennessee State Medical Association, American Medical Association, Tri-State Medical Association of Mississippi, Arkansas and Tennessee; also Mississippi Valley Medical Association, Southern Medical Association, and of the American Society for the Study of Alcohol and Narcotic Diseases. Illustrated. Price, \$5.00. F. A. Davis Company, Publishers, Philadelphia.

TRANSACTIONS OF THE FIFTH INTERNATIONAL SANITARY CONFERENCE OF THE AMERICAN REPUBLICS. Held in Santiago De Chile, November 5 to 11, 1911. Published and distributed under the auspices of the Pan-American Union, John Barrett, Director-General, Washington, D. C.

THE PRACTICAL MEDICINE SERIES. Vol. I., General Medicine. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and

Rhinology, Chicago Post-Graduate Medical School; Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical College. Edited by Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D. Series 1913. Price, \$1.50. The Year Book Publishers, 180 Dearborn Avenue, Chicago.

HOW TO TAKE CARE OF THE BABY. A Mother's Guide and Manual for Nurses. By Francis Tweddell, M. D., Alumnus Bellevue Hospital, New York; Fellow of the New York Academy of Medicine, Assistant Physician to the Babies' Hospital Dispensary, New York. Second edition. Revised and enlarged. The Bobbs-Merrill Company, Publishers.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, with collaboration of Jno. A. Witherpoon, M.D., Nashville, Tenn., Wm. Osler, M.D., Oxford; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester, Thos. H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harrold, M.D., London; Richard Kretz, M.D., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume I. Twenty-third series; 1. 13. Price, \$2.00. J. B. Lippincott & Co., Philadelphia and London.

BOOKS REVIEWED.

PROGRESSIVE MEDICINE, VOL. XV., NO. 1. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica, Jefferson Medical College. March, 1913. Lea & Febiger, New York City.

This volume of Progressive Medicine consists of 355 pages, contributed by Chas. H. Frazier, John Ruhrah, Floyd M. Crandall, Geo. B. Wood and Arthur B. Duel.

To the physician desirous of keeping abreast with his profession, it is needless to say that Progressive Medicine is indispensable. It would be useless to attempt in analysis, but the reader may be assured that the very latest will be handed him in palatable and assimilable form. The editors are to be commended again for the work they are so capably doing.

PSYCHANALYSIS. Its Theories and Practical application. By A. A. Brill, Ph. B., M. D., Chief of the Neurological Department of the Bronx Hospital and Dispensary; Clinical Assistant in Psychiatry and Neurology at Columbia University Medical School. Octavo of 337 pages. Philadelphia and London, W. B. Saunders Company, 1912. Cloth, \$3.00 net.

Freud's theories with reference thereto make up a large part of this rather unique abuses and sexual disorders are often responsible for abnormal psychic phenomena, we must acknowledge our inability to understand why the author has selected such a large per cent of his cases from this source. We cannot comprehend the process by which psychic analysis of dreams is able to recognize the dagger in one instance and the big toe in another to represent the penis.

There is no doubt much good to be obtained from reading the book, but the reviewer would seriously doubt his mentality if he believed all the author says.

THE CAREER OF DR. WEAVER. A Novel. By Mrs. Henry W. Baekus. Cloth, decorative, illustrated; 12 mo., pp. 373; net, \$1.25; postpaid, \$1.40. Boston: L. C. Page & Co.

High craftsmanship is the leading characteristic of this novel, which, like all good novels, is a love story abounding in real palpitant human interest. It is not a "problem story," although, in incident and accessory, it touches the high points of many problems. The characters, each clear, vivid and outstanding, are worth-while folk who breathe and speak and do things. They, of course, are all creatures of the fancy, but they are very actual and talk about and are concerned in an entertaining way with many of the underpinnings of human happiness. The madonna in the market place, the white-capped nurse in the hospital, the surgeon in the flush of achievement, the medical fledgling under stress of high endeavor, the butterflies of society in their fittings and the great public with pulsating temples are staged with effectiveness. There is a prophesy of wholesomer themes and saner thoughts in modern fiction shown in this instance by the utilization, and the effective utilization, of such subjects as great health movements, philanthropic movements and eugenic movements, both to adorn the tale and, in doing so, to point many a moral.

The most startling feature of the book is the way its author has torn aside the curtain and revealed certain phases of the relationship between the medical profession and society. Certain ethical obliquities and certain moral obtundities are exposed in their naked-

ness. The proprietary hospital, the public clinic, the commercial medical essay, the self-exploiting doctor and the vice of fee-splitting are here justly considered among the various sinister influences now operative in our social complex. The expose will cause the brow of many a lay reader to become corrugated into an interrogation point. It will cause many an honest doctor to flush with indignation or to bow his head in shame. But he will see that Mrs. Baekus has dealt with facts; in short, that she has renewed the golden rule of Balzac, who insisted that, "in the writing of great novels, every element of the great falsehoods must be true."

There is little, if anything, that can be said in the way of adverse criticism. There is none of that rawness of style or lack of finish that so generally characterizes the first novel. The ethical conceptions are very high. If anything more is to be said upon this point, it is that the author makes her characters lean a little backward, so straight are they. If all the imitations, implied as well as expressed, with which she hedges about her hero, were observed, there would be but little opportunity for conspicuous merit to acquire just reputation. Thus, for instance, the author puts her finger on a very serious abuse when she speaks of the use of reprints for advertising purposes in the profession. It is to be remembered that, for the most part, reprints are addressed to readers who are competent to judge of their merits. It would be folly for a writer to submit a contribution without merit to an intelligent jury made up of his confreres of the profession, and such practice should not be designated as advertising, at least in the offensive sense of the word.

This criticism does not, however, detract in the least from the high ideals of the book. It may be said that the hero, Dr. Jim, exemplifies those very impulses which stand today for the most progressive type of physician—the larger physician, the man who, being a physician, is at the same time a full-fledged citizen—and something more. The chapter on "The Doctor in Politics" is well worthy of thoughtful consideration.

There is not a physician in the United States who would have his profession properly understood by the public who ought not to see to it that this book is placed in the hands of every member of his clientele. Even the villain of the book, who figures in the title role, is only a villain by virtue of having his ethical sense obtunded by overweening personal ambition. It is something to do as Mrs. Baekus has done, and that is to take a first-class man, make a villain out of him, and then rehabilitate him in manly virtue.

CHARLES A. L. REED.

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SPINAL INJURIES.*

By Jere Lawrence Crook, A.M., M.D.
Jackson, Tenn.

Injuries of the spine have received very little attention from the profession at large, due, perhaps, to their rare occurrence, and the unsatisfactory results attending their treatment. The latter reason, however, is really one that should stimulate interest in the subject, in order that possibly some improvement may be attained in the management of these cases. The wide diversity of opinion as to the proper method of procedure in injuries of the spine affords another incentive for the careful and painstaking study of the subject. It is only by untiring study of the subject that the varying opinions may be reconciled and crystallized into a definite surgical viewpoint, which will enable one to act with promptness, precision and confidence in any given case. Before proceeding to the detailed report of two cases of spinal injury that have come under my care within the past ten months (one of which is now under treatment), permit me to quote briefly from various observers, in order to illustrate the wide divergence of surgical opinion as to the proper course to pursue in these cases.

Chipault advises early operation, except when functional disturbance is very slight or shock is very severe. Reduction by extension and local pressure is condemned, as such manœuvres are very liable to press fragments of bone into the cord and increase the damage immensely.

A. J. McCosh advocates early operation before there is time for secondary degenerations to become established. He has seen good follow in cases where the symptoms pointed to total transverse lesions. Mixer and Chase have pointed out that in spite of the absence of conduction, normal fibres may pass through the crushed portion of the cord. Kocher writes: "If one has had Munro's experience, that out of thirty cases of injury to the upper dorsal and the cervical vertebrae, one only within ten years lived and had partial restoration of function, while in the same period of time operative treatment resulted in three complete cures, then one will tend to advise operation in every case. The cases must be very carefully examined; if the temperature sinks low (as is often the case in high lesions of the cord), no operation is proper. Munro lost all the patients on whom he operated for acute crushing of the cervical cord. It remains undoubtedly true that we must diagnose irreparable total transverse destruction of the cord in the great majority of patients who exhibit sudden and complete loss of motion and sensation with immediate

*Read before Tennessee State Medical Association, April, 1913.

and total loss of the tendon reflexes; but it is also true that if the transverse lesion is not total, then remnants of sensation are present from the first, or appear in a few hours or days."

Jacobson ("Operations of Surg., ii, 1091 ed. 1908) is averse to any surgical interference in cases of fractured spine, owing to the amount of damage to the cord being usually, from the first, irreparable. Thorburn has the same opinion as Jacobson regarding fractures above the level of the first lumbar vertebra; regarding fractures below this level, he advocates surgical interference on the following grounds:

"1. We may here expect a regeneration of the nerve roots, the physiological evidence being strongly in favor of such regeneration, and not against it, as in the case of the cord.

"2. The absence of spontaneous recovery in such cases in itself indicates the presence of a mechanical obstacle, such as permanent compression by bone, blood-clot, or cicatrix, otherwise we should expect the roots of the cauda equina to recover as other peripheral nerves after severe injuries."

Burrell ("Trans. Am. Surg. Assn., 1905) studied the records of cases of spinal fracture treated in the Boston City Hospital, and came to the following conclusions:

"1. That fractures of the spine may well be divided into two classes: First, fractures of the spine with injury to the cord; and, second, fractures of the spine without injury to the cord.

"2. That it is not best to decide what the treatment of an individual case of fracture of the spine should be from the statistics, because the lesion varies so widely.

"3. That in many cases of fracture of the spine it is impossible to primarily state whether the cord is crushed or pressed upon by bone, blood or exudate, except by an open operation.

"4. That only by the persistence of total loss of reflexes, complete insensibility to touch and pain, and motor paralysis below the level of the lesion, can total transverse destruction of the cord be diagnosticated.

"5. That if pressure on the cord is allowed

to remain for many hours, irreparable damage to the cord may take place.

"6. That unless it is perfectly clear that the cord is irremediably damaged, an open operation to establish the condition of the cord and to relieve pressure is imperative as soon as surgical shock has been recovered from.

"7. That in certain cases of fracture of the spine, when the cord is not injured, but is liable to injury from displacement of the fragments of a vertebra, rectification of the deformity and fixation of the spine may be used.

"8. That if the cord is crushed, no matter what treatment is adopted, there will, of necessity, be a high rate of mortality."

Dr. John B. Murphy, in his monograph of April, 1907, published in "Surgery, Gynecology and Obstetrics," has laid down certain rules and guiding principles as the outcome of a large experience and close study of the subject. While recognizing the extreme difficulty of making exact rules for guidance in the management of injuries of the spine and spinal cord, yet he has formulated certain guiding principles, an abstract of which has been made by Binnie in his "Operative Surgery," which I will now quote:

"(a.) Paralysis from contusion may be due to 'traumatic zonal inflammation,' may have no initial symptoms and may only develop days or even weeks after the injury. Such cases are more liable to be cured without than with surgical intervention.

"(b.) When immediately after the injury there is uniformly transverse, complete paralysis of motion and sensation, operation is useless, as the cord is completely divided and regeneration is impossible.

"(c.) Fracture of the spine is present, but there is no great displacement. Paralysis appears hours, days or weeks after the injury. The paralysis is not complete and annular of both motion and sensation. It is impossible to diagnose whether the cord lesion is due to contusion or to pressure. Murphy advises strongly against operation.

"(d.) If under the above circumstances (c) there is marked displacement, it is proper

to diagnose compression, and immediate operation is indicated.

“(e.) Fracture of the spine is present below the twelfth dorsal vertebra. The rules given above no longer apply. At the twelfth dorsal vertebra the spinal cord ends and the cauda equina begins.

“The cauda equina, which begins here, is made up of essentially peripheral nerve fasciculi, and not of spinal cord fasciculi, as the axones of the motor root in this portion have their ganglion trophic cells above this level in the conus, and the motor axones in the cauda are covered with the sheath of Schwann or neurilemma. They, therefore, degenerate after division, and have the power of regenerating, the same as peripheral motor axones. The sensory neurons of the posterior roots of the cauda have their ganglion cells just inside the sacral and lumbar foramina. Their proximal axones, which run through the cauda to the spinal cord, are medullated, and have a sheath of Schwann. They are capable of regenerating, at least up to the posterior commissures, and from clinical observation, we believe, can again functionally contact with the posterior horn of gray matter. In other words, both the motor and sensory neurones in the cauda outside of the cord are histologically capable of regeneration under favorable conditions; that is, after accurate suture and exact approximation of the ends of the divided caudal fasciculi under aseptic conditions.

“Every case of fracture of or injury to the spine in the lumbar region accompanied by paraplegia demands operation. Causes of compression must be removed; divided fasciculi must be united by suture. It is easy to determine which are the right and left fasciculi by a mild faradic current up to the seventh day after the injury.

“(f) In cases of bullet wound of the spine, when the bullet is shown by the X-rays to be inside the spinal canal, operation is demanded. Other cases of bullet wounds of the spine should be treated by the rules already laid down.”

For the very clear and explicit summary of modern surgical opinion just quoted, I am indebted to Binnie's *Operative Surgery*, latest edition.

With this general resume of modern surgical ideas, regarding the treatment of these cases, I shall report the two that have come under my observation.

Case 1. Miss R. R., aged 19, on March 26, 1912, answered the door-bell at her home at 6:30 p. m., and met her discarded sweetheart at the door. He immediately began to upbraid her, and, drawing a pistol, said he intended to kill her. As she turned to run he shot her twice, one bullet passing through the skin under the arm and the other entering the back over the fifth dorsal vertebra, slightly to the right of the median line. At the noise of the shots her ten-year-old brother ran out in the hall, and was immediately shot in the abdomen and leg by the madman, who then turned the pistol on himself and put two balls through the left wall of his own chest, one superficial and the other wounding the left lung. All three patients were brought to the Crook Sanitarium, the shooter arriving first in custody of the deputy sheriff. While dressing his wounds the ambulance drove up, bringing both his victims. He was quickly taken to a private room, put under guard, and the little boy, who was in profound shock from internal hemorrhage, placed on the operating table, while his sister was put to bed, after temporary dressings were applied by an assistant. A laparotomy on the boy revealed two wounds in stomach, one severing the right gastro-epiploic artery, and a large wound on the left lobe of the liver.

The young lady was not examined carefully until after the completion of the operation on her brother. In the excitement attending the shooting no one observed the paralysis. She insisted that she was not much hurt, and begged for the doctors to attend her brother first. Before the operation on the little boy was completed, a mob had gathered about the sanitarium, threatening to lynch the prisoner if the boy died. I had to go out on the veranda and assure them that the boy had stood the operation well and had a chance to recover, and requested that they go home and give the patients an opportunity to sleep. Then, a few minutes later, I called the Sheriff and two policemen, put out the lights on my car, and we slipped the prisoner out of the hospital into the auto-

mobile and carried him quickly to jail. Up to this time I had had no opportunity of examining the young lady carefully. So it was about midnight when I discovered that she was paralyzed totally below the site of the wound. On account of the delay in examining her, it was impossible to determine whether or not the paralysis was immediate. This doubt as to the time of the occurrence of the paralysis gave us a slight chance to hope that it was due to hemorrhage within the canal, and not to complete severance of the cord. Her general condition was good, although she presented every symptom of complete bilateral paralysis, both sensory and motor from the time it was first discovered. Her condition for several days showed practically no change. I then called Dr. Lawrence, an X-ray specialist of Memphis, to come and bring a portable machine. He responded promptly and made a very good skiagraph, which I here present. With this as a guide, we operated at the site of the bullet wound, making a five-inch incision, with the wound in the center. Examination of the spinal column revealed a bullet hole through the lamina of the fifth dorsal vertebra. Laminectomy of this vertebra was done and the bullet found sticking in the body of the vertebra, having severed the cord in its passage. It was flattened out and jagged. It was removed together with a portion of the patient's dress, carried into the canal by the bullet. After satisfying ourselves of the uselessness of any further operative procedure, the wound was closed. The patient stood the operation well, and rallied promptly, but there was never the slightest improvement in the paralysis afterwards. In a few days trophic changes occurred, decubitus developed, temperature and pulse rate increased, and in spite of a brave and wonderful fight for life, she gradually weakened, losing her flesh, strength and beauty almost imperceptibly, and thus, fading like a flower, she finally gave up the fight, and died on June 15, almost three months after the injury.

Case 2. G. M., aged 21, on January 21st, last, was caught by the shaft of an engine in

a gin, 15 miles from the city, and wound about the machinery in such a way that the upper part of his body and arms were terribly lacerated, and all of his clothing torn from him. When the machinery was stopped and he was picked up, he was found to be totally paralyzed below the line of the sixth dorsal vertebra. The paralysis was immediate, uniform, transverse and complete, of both motion and sensation, below the site of injury, which we diagnosed to be about the level of the sixth dorsal vertebra. He was brought to the Crook Sanatorium the next day, having been previously attended by three other competent physicians, all of whom saw him within a very short time after the accident, and all stated that the paralysis was immediate, total and complete. After a careful study of the case, we decided not to operate, basing our decision largely on the conclusions in Murphy's article in "Surgery, Gynecology and Obstetrics," April, 1907, an abstract of which was quoted previously. At that time we could not determine on any deviation in the spinous processes. An X-ray picture, taken soon after, showed no displacement. Some slight trophic changes soon occurred in the great toe of each foot, but these have healed. There are two areas of sloughing in the posterior portion of both legs near the ankle. The back is almost free from ulceration. Three lacerated spots, due to the primary injury, over the iliac bone on the left, have entirely healed. There has been, from the second week until about the 18th of February, complete absence of reflexes in the limbs. On the latter date I found reflexes beginning again, and they have gradually become more marked, especially the plantar reflexes, and at the same time, on careful examination of the patient, turned on his face, we found a slight lateral deviation of the sixth and seventh spinous processes. His general condition for the past seven weeks has been first class, temperature and pulse normal nearly all the time, appetite and digestion good, kidneys and bowels acting well, urine normal, catheter was used regularly three times a day until the 20th of February, since which time it has not been necessary. There has been no infection of the bladder.

OSTEOPLASTIC OPERATIONS IN THE TREATMENT OF POTT'S DISEASE.*

By R. Wallace Billington, M.D.,
Nashville.

Lecturer on Orthopedic Surgery, Vanderbilt
University Medical Department, Super-
intendent Vanderbilt University
Hospital.

The problem of the cripple is one not only of orthopedist and patient, but of society and state, and the tuberculosis cripple is a double problem which merits the earnest attention of everyone interested in public health and the great sociologic problems of the day. Therefore, I make no apologies for bringing before you a subject which is attracting so much attention both within and without the medical profession at this time.

There are many applications now being made of our rapidly increasing knowledge and almost incredible results in the field of plastic bone surgery, but in no condition does it promise more brilliant results than in the treatment of spinal tuberculosis. Spinal caries, from being the most dangerous and deforming of all the forms of bone and joint tuberculosis and after most successfully resisting all radical efforts of surgical science, now promises to take its place among the most amenable types. I would not appear too sanguine nor make the impression that marked hunchbacks can be made over into perfectly shaped and developed bodies, but after observing the results of the two years' experience of Hibbs and Albee of New York and a limited personal experience, I am convinced that they have contributed one of the most important recent advances in orthopedic surgery. Although their methods differ considerably in detail, their end results are the same, their object being to produce a firm ankylosis of the diseased region of the spine.

Whatever form of local treatment is employed, it should be emphasized that outdoor, hygienic, dietetic and sunlight treatment is essential in all forms of bone and joint tuberculosis no less than in the pulmonary type.

The general treatment cannot be discussed in detail here, but it is all important and must not be forgotten if one is to expect any certain or lasting results from any form of local treatment.

The well known principles of local treatment of epiphyseal tuberculosis are: (1) immobilization, (2) protection from pressure on the diseased area, (3) operation such as curettement, excision, resection, erosion, etc., these being employed only in selected cases. Such surgical methods may as well be omitted when considering tuberculosis of the spine, as the many attempts to apply them here have for the most part resulted in failure or worse. Therefore, we must rely on the first two principles, immobilization and protection. This accounts for the many forms of braees, corsets, plaster jackets, beds, frames, etc., which have been employed. The many kinds of apparatus in use testify to their inefficiency, at least in many cases.

No form of external appliance has ever been devised which would give **absolute** fixation and protection of the part for an extended period. It is in just this essential that all former methods of treatment have fallen short of the ideal. In the osteoplastic operations under discussion this has been accomplished by producing a fusion of the posterior segments of the diseased vertebrae, without entering the diseased area in the bodies of the vertebrae, thus producing not only an **absolute** but also a **permanent** fixation and protection. Lange attempted to accomplish the same effect by the application of metal plates to the spinous processes, but failed for obvious reasons.

It is an accepted fact that epiphyseal or joint tuberculosis will usually disappear with marked rapidity if the joint can be perfectly fixed as by an ankylosis. This has been very logically explained by Ely, of Denver, in this way: The tissues about a joint which are vulnerable to the tubercle bacillus are the red or lymphoid marrow of the epiphysis and the synovial membrane (also a lymphoid tissue), the presence of both of which depends upon motion. Therefore when motion is abolished these tissues disappear and the disease becomes self-limited. This is borne out by the fact that when a true ankylosis is obtained

*Read before Tennessee State Medical Association, April, 1913.

either by operation or by nature's own effort in the case of any joint, the tuberculous process nearly always rapidly disappears. Such an ankylosis we find has been effected by nature in practically all cured cases of Pott's disease, no matter what may have been the form of treatment.

With our previous methods it has taken nature years to accomplish this, during which period patient and family must sacrifice much of time and happiness in the attention to unsightly and troublesome mechanical appliances, in spite of which the outward deformity increases more or less. The effect of brace wearing and continued invalidization on a child's mind and disposition are also serious problems, and any method which minimizes this evil effect deserves consideration. Then how often have we seen these little patients, apparently progressing nicely under conservative treatment, overtaken by some intercurrent disease, such as measles, whooping-cough or pneumonia, and their lives snuffed out with apparently almost no resistance, due to their attenuated general condition. Other grave dangers of prolonged disease are tuberculosis, meningitis, pulmonary and abdominal involvement, abscess with mixed infection, amyloid degeneration of the viscera, etc., all of which are dangers in direct ratio to the duration of the spinal disease.

Though these are serious faults in our established lines of treatment, no one doubts the value of it, far from ideal though it may be, who has seen the wonderful improvement in health and comfort following the application of a cast or brace or Bradford-Whitman frame. But how much better than this would be a treatment that would render all local measures unnecessary after a period of a few weeks, after which the patient might go about unrestrained with the assurance that there could be no further increase of deformity and that active disease must soon disappear.

As before suggested, both the Hibbs and the Albee operations produce a stiffening of the spine in the affected area, including a healthy vertebra above and below the diseased ones, thus obtaining absolute fixation and protection by means of an internal bone splint, and that in a comparatively short period. The patient can then be allowed unre-

stricted activity with much better opportunity to carry out the general measures necessary to a complete and permanent cure. A brief outline of the two operations will be given for the benefit of any who may not be familiar with them.

Hibbs makes skin incision directly over supraspinous ligament, then through it to tips of spine. Periosteum from spines and laminae is separated and laid to either side. All diseased vertebrae and a healthy one above and below are similarly treated. The spines are then partly severed at their bases and broken down so as to contact with the corresponding ones below, thus forming bony continuity across the diseased segment. The lateral walls of periosteum and supraspinous ligament are then united over the broken down processes. In some cases he has sutured the contiguous borders of periosteum and chipped off a piece of each lamina and turned it across the corresponding interlaminal space below before closing, but these two steps he considers unnecessary. The skin is closed and a spinal brace applied. Absolute recumbency for eight weeks, then sitting up for four weeks, then walking about wearing brace four more weeks, after which brace is left off gradually, being free from appliances in sixteen to eighteen weeks after operation. I have seen Hibbs do his operation several times, and it usually requires about 45 minutes for completion. In one of these cases he found spines and laminae of three vertebrae already fused together by nature, so he completed the operation by joining two other adjacent vertebrae to this incomplete bridge. He has encountered this partial fusing in a number of cases, but in none was the fusion complete in including all the diseased vertebrae together with a healthy one above and below. Had such a complete bridge been previously produced by nature, a cure would have, of course, already been effected and there would have been no symptoms of active disease demanding operation or other treatment. Hibbs claims that he simply imitates nature's effort by stimulating bone proliferation and fusion along the posterior segment of the spine. Last November he had operated about 75 cases, with no mortality and with perfect wound healing in all. These included

cases in all stages, with disease at various points in the dorsal and lumbar regions, and at ages from three to twenty-five. At that time I had the pleasure of examining about a dozen cases that had been going without apparatus for periods up to eighteen months without any evidence of active disease or increase of deformity as shown by photographs and tracings. The kyphos had been considerably reduced by operation and improvement in general health was reported in all.

Albee makes a curved incision slightly lateral to spines, thus obtaining a skin flap to cover the bone graft and throwing the skin sutures to one side. This minimizes the danger of infection. The supraspinous ligament (ligamentum nuchae if in cervical region) is split longitudinally, taking care not to cut it transversely and so destroy its supporting function. With an osteotome with long bevel the spines are split in a vertical plane from tip to base and the same half of each is bent or broken to one side. After dividing the interspinous ligaments a furrow is thus fashioned for the implantation of the graft. This field is protected by hot sponge while the graft is being removed from the internal surface of tibia by osteotome and mallet or motor saw. For this patient remains prone with leg flexed on thigh and resting on a sandbag. The graft carries with it its periosteum and endosteum, is one-fourth to one-half inch wide and as thick as the bone cortex, and is long enough to span the diseased area from healthy vertebra above to the same below. The attached periosteum may be incised transversely in several places to allow bone proliferation on all sides. If Macewen is correct, in that the periosteum is not osteogenetic, but acts as a limiting membrane, it might be better to remove it completely. When the graft is in place the periosteal surface looks backward and the lateral raw surfaces are in contact with the split surfaces of each spinous process which gives numerous contact points, insuring the life of the graft. The split supraspinous ligament is then sutured tightly over the graft by medium or heavy kangaroo tendon, thus holding it firmly in place. If there is only slight kyphosis the graft may be sprung sufficiently to round the curve and fastened under some tension at either end.

which, aided by the subsequent recumbency, will produce some correction of the deformity. It is advisable, when possible, to put patient on a convex Whitman frame for a time before operation, and so obtain more or less recession of the kyphos, which can be held thus or further improved by the operation. If kyphosis is marked the graft may have to be bent by partially sawing transversely from endosteal surface at several points near the center, just as a carpenter bends a plank. The ends should always be held down under slight tension to insure further improvement of deformity. The skin is sutured in the usual fashion. Patient is kept recumbent five to twelve weeks on some fixative appliance, Albee preferring the Whitman convex stretcher frame. After this patient gets up and goes about without any artificial support. In three instances the operation has entered burrowing cold abscesses, but primary union was obtained just the same as in all other cases, of which he has operated over one hundred. It is unusual, however, to encounter diseased tissue in this region, since the primary involvement is of the bodies or anterior segment of the vertebrae. Therefore, healing is practically assured if the proper aseptic technique is observed. It is advisable in all bone work, as Lane has pointed out, to do the work with instruments and to keep the hands out of the field as much as possible.

Whether transplanted bone can live as such (osteogenetic), as believed by Macewen, Albee, Kausch, Barth, Marschand, Frankenstein and others, or acts simply as a mechanical scaffolding (osteoconductive) for the osteoblasts coming from adjacent bone, as claimed by Murphy, Axhausen and Steida, is unimportant here from a practical standpoint. We know it to be a fact that the graft unites firmly to the spines of the vertebrae and that it increases in size to meet the requirements of weight and strain, according to Wolff's law. Sinuses are no contraindication to either operation so long as they do not open in the field of incision. In fact, they usually close promptly after operation as was the case with the patient here presented.

Certain mechanical principles involved in the two operations are somewhat different. In the one there is a fusion of laminae and

broken-down spines, giving a broad, flat bone bridge occupying the plane of the posterior neural arch, which must resist the force of antero-posterior motion by its bending strength alone; the other does not destroy the spinous processes which acts as the long ends of so many levers in preventing spinal flexion. Therefore, if a bone graft is anchored to several of these near their tips this prevents their separation, which must occur when the spine is flexed, the articular processes acting as a fulcrum. Therefore, spinal flexion is resisted by the tensile strength of the graft as well as by its bending strength. A triangular support is thus formed, the graft behind and the articular facets on either side in front making the three corners of the triangle.

Other points of advantage in the Albee operation are: The dissection is not extensive; it is in the middle line and therefore produces only slight hemorrhage; it does not enter the inter-laminal spaces, which might endanger the cord by hemorrhage or the slip of an instrument; there is less mutilation and manipulation and therefore less liability to infection; it is more easily and quickly done; and, lastly, the period of convalescence and confinement is only about half as long as in the Hibbs operation.

Advantages claimed by Hibbs are: The result is more nearly an imitation mechanically of nature's cures; it does not transplant foreign bone, but simply stimulates local osteogenesis; it corrects a little more of the deformity; and necessitates one wound instead of two.

I have performed the Hibbs operation myself, only on the cadaver, though I have seen the author do the operation several times. However, all things considered, I believe that Albee's operation is the more safe and surgical procedure, though certainly there is very little to choose, from what I have seen, between their final results, both seeming eminently satisfactory so far. For the reasons stated, and others applying particularly to disease in the cervical region, I chose the transplantation operation in the case which I here present.

Case Reports.

Case 1. Elaine W., white female, was 7 years old March 7, 1913. Father and mother living and healthy. Some uncles and aunts died of tuberculosis. Was considered a delicate baby, walked at 14 months. At age of two years had pains about chest and night cries, which lasted for a year or more, during which time health declined, but diagnosis was

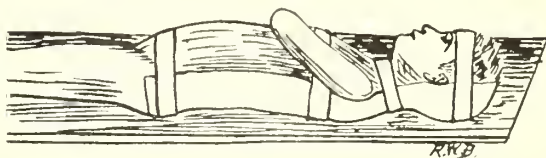


CASE 1—Before operation. Notice kyphos, rigid attitude of head and emaciation.

not made. Then improved some for about a year, then mother noticed stiffness of spine and pain in spine and chest became severe, and a few weeks later there was a progressive weakness of arms and legs which became almost a complete paralysis. This was three and a half years ago, at which time she was first seen by Dr. McPheeters Glasgow. He made a diagnosis of Pott's paralysis of both upper and lower extremities, although there was scarcely any noticeable kyphos. Dr. Glasgow applied a spinal brace with jury-mast and paralysis entirely disappeared. At end of two years there were no symptoms of

active disease, so brace was left off, but after two months pain and muscular spasm returned. Brace was then reapplied, but did not relieve symptoms this time, probably because she had outgrown it, or the family did not attend to its proper adjustment. I saw her in consultation the middle of last December, and advised bone transplantation. At that time she was having pain, local and referred, muscular rigidity which completely fixed head and neck in relation to the body in the position shown in photograph. There was marked restlessness at night (night cries), and during the day she sat or lay around most of the time, supporting her head with her hands. She would not play, was losing weight, and had some afternoon tem-

proximation of bone surfaces at upper end of graft on account of the smallness and inaccessibility of the spinous processes. At the



CASE 1. Drawing showing "plaster bed" for fixation during recumbency. This is easily removed for dressings, etc.

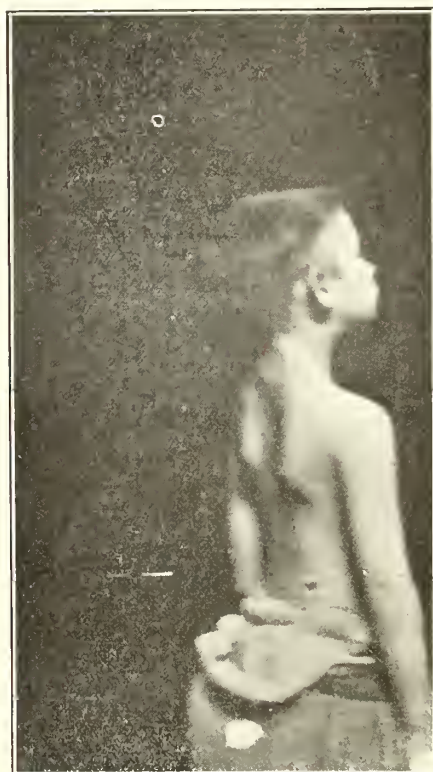
end of operation, with patient still in prone posture, a plaster bed was applied to the posterior hemisphere of head, neck and body and fastened there by bandages about the forehead, neck, chest and pelvis as illustrated in the drawing. I conceived this idea as the most effective and convenient means of im-



CASE 1—Eleven weeks after operation. Improved nutrition and attitude of head. Kyphos reduced. Sinus healed.

perature. Kyphosis was well marked at sixth and seventh cervical vertebrae, and there was a discharging sinus on left side of neck.

Operation, assisted by Dr. Glasgow, on Dec. 17, 1912, after the method of Albee. There was some difficulty in getting satisfactory ap-



CASE 1—Eleven weeks after operation. Note ability to elevate chin, field of operation and slight deformity.

mobilizing the cervical region and have found it entirely satisfactory in two cases. She remained recumbent on this for seven weeks. Temperature became normal in a few days

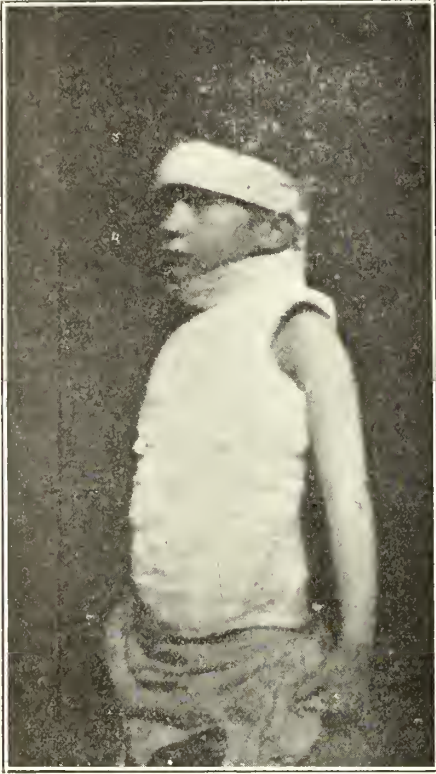


BEFORE OPERATION



ELEVEN WEEKS AFTER OPERATION

and sinns closed by the third week. A high Calot cast was applied at end of seventh week and patient allowed to go about wearing this for four weeks. This was removed at end of eleven weeks (nine weeks ago). She has gained about ten pounds, runs and plays



CASE 1—High calot plaster jacket used during four weeks of ambulatory treatment.

with other children all day without the slightest complaint, has no muscular spasm, but a surprising amount of head motion; in fact, there are no symptoms of active disease.

Case II. On March 28th, I performed the same operation on a case of dorso-lumbar Pott's of four years' duration in a man 31 years of age. This case was somewhat easier than the former, because of the larger and more superficial spinous processes. It is too early to report any final results in this case, but the wounds have healed perfectly, and there is no evidence of trouble from the transplanted bone. He is still recumbent in a plaster bed, and is much improved in general appearance, having gained at least 25 pounds. He had suffered severely from pressure neuritis, which has entirely disappeared. An in-

teresting feature of this case is the fact that before operation his urine showed large quantities of albumen and hyaline, epithelial and granular casts. Nitrous oxide-oxygen anesthesia with the Teter apparatus was used for the operation, which lasted forty-five minutes. The day after operation the urine showed much less albumen and casts, and on the eighth day it was negative to both and has remained so to the present (May 10, 1913).

Case III. Elizabeth S. Colored female, age 6. Had spinal caries of four years' standing involving seventh, C., and first, second and third D. vertebrae, with a large, angular kyphos. There was marked emaciation and the usual symptoms of advanced, acute, active disease. Had not had any continuous treatment, though had worn a brace and casts part of the time. I did not think this case a very favorable one under any form of treatment. Bone transplantation was done four weeks ago. There was very little shock following, and the temperature became normal after five days. Both wounds healed without infection, and she has gained rapidly in weight. She is still recumbent in a plaster bed similar to the one used in case I. A full report of this case and the one preceding will be made later.

From considerable observation and this limited experience, I believe, that we should no longer consider this procedure entirely experimental. Of course, later and more extensive reports will be necessary to determine its final status, but enough has already been done to prove that it is a safe and highly beneficial aid in the management of this most serious and deforming affliction.

DISCUSSION.

DR. M'PHEETERS GLASGOW, Nashville: This case was of great interest to me. It fell into my hands about four years ago. The child was brought into my office by the parents with the statement that it had "creeping paralysis," whatever that is. At any rate, the child was in a pitiful condition. She could sit up, but could not walk. She could not feed herself, and suffered at night with so much pain that she could not sleep. The pain was of an agonizing character. The child had an afternoon temperature. She had wasted away; it was pale and anemic. It was interesting to me to go into this case because

of the unusual position of the Pott's Disease. As you know, in the cervical region it is very rare. This child had motor paralysis; there was no loss of sensation. To clinch my diagnosis, as I made it by some stiffness of the spine and very slight prominence of the vertebrae, was a sinus on one side which was discharging this cheesy pus. I advised putting a splint on the child. I put on a splint and a jury mast, and in three weeks the child could walk, and she recovered so that she could play with other children. She gained flesh, got rosy cheeks, and her condition was in good shape. This brace she wore for two years. I saw her every month or so. She improved. The sinus healed up, and she looked as though she was going to get a permanent cure by ankylosis. At the end of the two years she seemed to be doing so well that I advised taking off the brace and watching her. It was taken off for six weeks or two months, after which she began to relapse into former condition, and the characteristic position developed of holding the head or resting the chin in hands so as to keep the pressure off of damaged vertebrae.

Dr. Billington had just returned from New York and was very enthusiastic over Albee's operation. I got him to see the case. He thought it would be a good one for this operation, although probably it was the most difficult region for the operation, because in the upper part of the neck, the spinous processes, are rather short. However, he had no trouble, as he has described to you. He made a curved incision, and with retractors pulled the skin back to the median line and cut down on the spinous process, and with chisel split the spinous processes down and turned one side down, making a trough to transplant liberal graft. The patient lying on the face, with the leg flexed on the thigh. Operation easily takes out this small piece of bone from anterior part of tibia four inches long by one-quarter inch wide, leaving the periosteum intact, then wedged this graft in trough spoken of above, with some tension above and below, with sutured chromicized catgut, fascia to each other enclosed graft. While the child was still lying on its face he made a plaster bed and after the plaster had hardened turned the child to back, and it lay in this bed for several weeks. Later he put on a callow jacket and the child got up. This method has great advantages, as there is very little danger in the operation, and you do not go near the diseased area. Great care must be taken in the technic not to have suppuration, but if there is slight suppuration it is not dangerous and may still secure a good result. The result in this case has been good, and I think Dr. Billington is to be congratulated on it. It seems to me, this method is a great advance in the treatment of Pott's disease.

DR. BILLINGTON (Closing): The management of Pott's disease by mechanical methods

which have been considered best, together with the general hygienic and dietetic and outdoor treatment, has been a long and tedious process requiring anywhere from two years to a life-time. You can never tell a patient in the beginning whether it will take three or four or six years, or whether it is ever going to get well. A great many of them get well by proper mechanical treatment; from 60 to 70 per cent of the cases, with more or less deformity. Even at best, it is more or less uncertain, and it is a long-drawn-out process and a very troublesome thing to manage, and usually we have a great deal of difficulty in getting the mechanical treatment carried out properly by the family or attendant. In the cervical region it is difficult to handle these cases on account of the difficulty of immobilizing the head. You can see the disadvantage of long-drawn-out treatment, which keeps the general health below par all the time. If by operative means we can produce ankylosis which is permanent, we never have to remove the brace. We have got a method of treatment which is permanent, which requires no further attention, and the patient goes about like other children, develops mentally and physically like other children, has the advantage of outdoor recreation and exercise, and, in short, there are so many advantages connected with this form of treatment that it would be hard to enumerate them all.

DIABETES MELLITUS—REPORT OF CASE.*

By K. S. Howlett, M.D.,
Franklin.

There are many interesting, though conflicting and unsettled theories in regard to the nature, ethiology and pathology of diabetes, and the disease still presents many unsolved problems.

The treatment is always long-drawn out, tedious and usually disappointing, and the multiplicity of drugs of widely variant nature which have been used in its treatment only proves that none of them have been efficient.

It is for this reason, perhaps, that the disease attracts so little interest, and as a rule receives so little attention from the general practitioner, who, though wide-awake, and on the lookout for practical and useful sug-

*Read before Tennessee State Medical Association, April, 1913.

gestions, is usually too busy with all sorts of cases, and has too few of any special kind to follow out mere theories in regard to any disease.

However, diabetes is evidently increasing in frequency, and when met with presents enough practical problems to demand careful study.

Its most prominent symptoms, polyuria and glycosuria, naturally direct attention toward the kidney, and on account of the erroneous impression which these convey to the laity as well as to some physicians, it is probably well in defining this disease to state in the beginning that it is not a disease of the kidney, nor is the kidney involved until the later stages, except in those rare cases of renal or Phloridzin diabetes.

It is a disease of metabolism, in which the power to assimilate and consume sugar is disturbed or abolished, resulting in an excess of sugar in the blood and its elimination in the urine.

At just what point in the process, by which the carbo-hydrates are ingested, digested, transformed into glucose, assimilated and finally consumed, the fault lies, is difficult to determine.

It is evidently not due to taking excessive quantity of carbo-hydrate food, as those who eat starches and sugars in large quantities are not specially prone to develop the disease, and the percentage of sugar in the blood, which is normally from 1-10 to 2-10 per cent, is rarely disturbed by excessive consumption of this kind of food.

The liver seems to have the power of taking out just so much of the carbo-hydrates as is needed from which to manufacture the necessary amount of glucose, and when this food is not supplied in sufficient quantity to use the proteid foods and even the tissues themselves, from which to draw its supply.

On account of the prominent part which the liver exercises in extracting, making and storing sugar, furnishing it to the blood as demanded, it is very natural to attribute the excess of sugar in the blood and urine to an exaggerated function of that organ, or to a leakage in its storage warehouse. However, there seems no evidence that prior to, or in the beginning of, this disease that the glyco-

genic function of the liver is in any way exaggerated or disturbed, or that the liver is a causative factor in diabetes.

The pancreas is, perhaps, the organ which has the greatest evidence against it. It is supposed to furnish a ferment which exercises a glyco-lytic function upon the sugar, splitting it up in such a manner that it readily undergoes combustion, thereby furnishing heat and energy to the body.

If the pancreas is removed or destroyed, glycosuria results, though its duct may be completely occluded without producing this result. These facts have led the authorities to attribute the production of this ferment to certain little ductless areas in the pancreas called the Islands of Langerhans, some investigators claiming that in all cases of diabetes these areas are congested or diseased.

From all of the facts before us, it seems evident that the majority of cases of diabetes are accompanied by some disturbance of the pancreas, but whether this causes or is caused by diabetes is still a doubtful question.

There is some evidence to indicate that the trouble may be at the other end of the line, and that there is a lessened capacity upon the part of the muscles and other tissues to consume the sugar furnished, and as a result it is thrown back on the blood.

It is also suspected that there may be some toxic agent generated in the intestinal canal or elsewhere and taken up in the blood which poisons, so to speak, the glucose, thereby rendering it unfavorable for consumption.

By some it is thought that the real trouble is in the nervous centers, and that the disturbance in the function of the organs and tissues involved originates there. Color is given to this contention by the fact that the mental work and worry predisposes to the disease. Experiments have shown that out of a given number of mental workers, scientists, physicians, teachers, etc., there were found ten per cent of diabetics, while from an equal number of physical laborers there was less than one per cent.

It seems impossible, therefore, with the present lights before us, to determine whether diabetes is brought on by over-production or under-consumption of sugar, whether the trouble is in the liver, pancreas, blood, nerv-

ous centers or terminal cells, and at this time no one would attempt to promulgate a definite causation.

While the etiology and pathology thus present such puzzling problems, the diagnosis is easy. Cabot putting it at the head in the percentage of correct diagnoses with 95 per cent. The diagnosis can be definitely made from one symptom, and only from this one symptom, viz., sugar in the urine. The only possibility of error is in those cases of temporary glycosuria, which can be eliminated by repeated urinary examinations.

The treatment will not be discussed in this paper, except to present the Guelpa-Starvation-Purgation plan of treatment, which furnishes the real reason for the presentation of this paper.

In 1910, Guelpa of Paris read a paper before the British Medical Association in London, in which he claimed remarkable results from this treatment in diabetes and other chronic diseases. Later, Guelpa's little book, "Auto-Intoxication and Disintoxication," setting forth his ideas in detail, was translated by Arnold, an English physician. It was a review of this translation in the *Journal of A. M. A.* which first directed my attention to the treatment.

Briefly the plan is as follows: A brisk saline purge, a whole bottle of Hunyadi water, or an ounce and a half of Sodii sulphat, largely diluted, is taken in the morning, and no food at all allowed for three or four days, the purge being repeated each morning, the dose being modified according to the effect. The patient takes all of the water desired, coffee, weak tea, fruit infusions, lemonade, etc., without sugar, of course. At the end of four days the patient is put upon a milk diet, about 2½ pints per day being allowed, and kept upon this from five to seven days, after which the usual diet is resumed. In diabetes a diet of potatoes, green vegetables and meat being allowed.

As soon as the patient has recuperated from this seeming heroic depletion, the process is repeated and again repeated, as indicated by the results and conditions presented.

Guelpa claims from this plan more than a mere treatment for diabetes. He says it is a very valuable therapeutic process for gen-

eral use, and classes it with the rest, recreation, general asepsis or anti-asepsis.

He compares it to a house-cleaning, in which the accumulated dust and debris is removed and a general renovation of the entire household accomplished.

He says that the fat and other reserved material stored up in the system grows stale and old, and when needed is usually unfit; that these intervals of abstinence with purgation causes all of this stale material to be used up and removed, enabling the organism to form new, fresh and more vigorous cells during the feeding period.

He claims that in health, and often in disease, we eat before we are hungry, and practically always have in stock a surplus of nutritive reserved material. He compares this method to a fortress, keeping its food supply until it becomes stale and unfit for use, instead of consuming it, throwing away the refuse at regular intervals, and bringing in a fresh supply.

He has a somewhat novel theory in regard to hunger, viz: that instead of hunger being that sensation which warns one that nutritive material is needed to replace an exhausted supply, the first sensation of hunger is only the notice that toxic matter is being absorbed from the intestinal canal, and that the first function which the ingested food performs is to absorb this toxic material, thereby relieving the first hunger sensation. This theory accounts for his use of the brisk purgative, which quickly removes the toxic matter from the intestinal canal and glands, and thus obviates the first pangs of hunger.

The results claimed by Guelpa for the abstinence purgation plan are as follows: First, entire absence of any painful or unpleasant hunger; second, positive diminution of the bacteria in the intestines; ideal disinfection of the canal; third, relief of thirst, especially marked in diabetes, where thirst has been a prominent and persistent symptom; fourth, diminution or suppression of the perspiration even in very hot weather; fifth, good sleep, shortened in duration, but very refreshing; awaking promptly to mental activity without the usual period of drowsiness; sixth, slowing and steadying of the pulse and lowering of the blood pressure (by the way, remedies

which increase blood pressure will produce glycosuria) with an increase in the number of both red corpuscles and leucocytes, and in the percentage of haemoglobin.

This result is contrary to what one would expect, but Guelpa claims to have had the test accurately made by those competent to do the work, and that it was shown that this increase in the number of red blood corpuscles and the haemoglobin thereof continued uniformly up to the fourth day of the fast. There was also an increase of the white corpuscles, especially of the younger forms, the mononuclear, which are regarded as the most characteristic reparatory elements.

This confirmed his conclusion that it was the older, more infirm and stale cells which were first consumed in the process, while the younger and more vigorous were left for future use.

Seventh. Loss of weight at the rate of about two pounds a day, which he is sure comes chiefly from adipose tissue and does not cause much loss from vital organs. He quotes Yco, according to whose figures, from cases of inanition, fat loses 97 per cent, spleen 63, liver 56, muscles 30, blood 17; whereas the loss from the central nerve system is nil.

Eighth. Disappearance of joint pains and muscular stiffness, greater freedom and loss in expanding the lungs, less embarrassed action of the heart, and a general feeling of suppleness, vigor and well-being.

In chronic and wasting diseases, complete rest is always enjoined in connection with this treatment. Guelpa concedes that rest is an element of capital importance in almost all medical treatment, but claims that this "dis-intoxication" is of much wider efficiency than rest and incomparably more rapid in its effects.

From the theories in regard to the results of this plan, one would consider the treatment more applicable to gout, rheumatism, hepatic engorgement, obesity, etc., than to a wasting disease such as diabetes. However, it is diabetes that Guelpa reports most cases of and in which he claims such marvelous benefits. Reporting one case in which gangrene with discoloration and abolition of sensation had set up, in which the part was restored under this treatment.

He frankly acknowledges that the results obtained by him seem so marvelous as to tax the credulity of his fellows, and even to arouse a suspicion in his own mind that he was laboring under an auto-suggestion. However, the definite results which he has seen had convinced him, and he claims to have brought before his professional brethren only definite and well-proven facts, that these facts justified him in affirming with the force of conviction that diabetes, when not dependent upon an organic lesion, was the most easily and rapidly curable of diseases. In view of our present knowledge of diabetes, however, the question arises, whether all cases of genuine diabetes may not be dependent upon some organic lesion.

In addition to the general results outlined above, the special results in diabetes are a prompt lessening of the quantity of urine and the percentage of sugar on the first day of the fast, and a lowering of the specific gravity. On the third day, usually, the sugar disappears entirely, the specific gravity becomes normal and quantity of urine is reduced to from 1½ to 3 pints in twenty-four hours. Accompanying this is the absence of thirst and hunger, and a surprising lack of weakness or exhaustion.

When milk diet is begun, sugar at once reappears, but never increases to the quantity present before the fast, and disappears more promptly at the next fast and becomes less and less during each feeding period, the amelioration of the other symptoms keeping pace with the lessening of the sugar. With this rather imperfect resume of Guelpa's theories and claims, I submit a report of one case in which I have used this treatment.

R. H. P., male, age 40 (when the first symptoms appeared), teacher, habits and surroundings the very best, without hereditary tendency to any constitutional disease, had a series of carbuncles on his neck, beginning in April, 1911, and continuing through a period of several weeks. Two or three times during this period the urine was examined, Haynes test being used, with negative results.

With rest, recreation and general tonics during the summer of 1911, he apparently regained his normal health, resumed his work, and remained seemingly perfectly well until

the spring of 1912, one year from the first indisposition, when he was again troubled with a crop of carbuncles, and again ran down in health, losing some flesh and considerably in strength.

In June, 1912, from a slight bruise on the instep there developed an ugly abscess or boil, which although promptly opened and emptied, was slow in healing. His general health, his strength and power of endurance, more than his flesh, was failing perceptibly, and although there was no excessive thirst, increased appetite or polyuria, the urinary test at this time showed the presence of sugar.

The patient was put on a strict diet, with the carbo-hydrates eliminated as completely as possible and various drugs used, including the Salicylates, arsenic, codeine, and other forms of opium, to the limit.

In spite of this, the glycosuria continued and the quantity of urine as well as the percentage of sugar gradually increased.

To get the full benefit of freedom from business cares and of rest and recreation, the patient then went to the Rocky Mountains, where he remained for three months. During this time he was under the care of a physician, who used, in connection with strict dieting, opium and arsenic in the form of P. D. & Co.'s sodium cacodylate, giving the larger or three-grain doses, hypodermically, twice or three times a week. During his stay there the slightest exertion would exhaust his strength and exaggerate all his symptoms, and when he returned home, in October, 1912, while he had lost only two or three pounds in flesh, the other symptoms were much more pronounced than when he left home. His strength and power of endurance were distinctly lessened, and he was passing from 3 to 5 quarts of urine per day, having 7 per cent of sugar.

From this time until January of this year the patient slowly but steadily grew worse. About this time, when the patient was completely discouraged and the physician run aground as to suggestions, a review of Guelpa's book appeared in the *Journal of the A. M. A.*

The plan suggested appealed strongly to my patient, who had often tried fasting during attacks of indigestion, and gave him fresh

hopes. Without waiting for the little book (which was ordered at once), he insisted upon trying the treatment under the directions given in the review, and the first fast was begun.

The day preceding the fast he had passed five and one-half quarts of urine, sp. gr. 1050, sugar 7 per cent; second day, quantity 3 pints sp. gr., 1020, sugar only a trace; third day, quantity 2 pints sp. gr. 1018, sugar none; fourth day, same. During the fast the thirst disappeared promptly, and at the end of the fast the patient felt that he had lost nothing in strength or vigor, the pulse was slow and steady, with slightly lowered blood pressure.

Contrary to Guelpa's report, however, the patient felt the hunger keenly and slept poorly, especially during the third and fourth nights.

We had not used the purgative, however, as at this time we did not know that this was a part of the plan. Twenty-four hours after beginning the milk diet, sugar reappeared in the urine and gradually increased, until on the tenth day from the end of the fast it again showed 7 per cent sp. gr. 1050. The quantity, however, was only three quarts, hence the sugar waste was only a little more than one-half of what it had been before the fast.

The thirst did not return, the patient felt brighter, stronger and altogether more comfortable, and we were somewhat encouraged by the experiment.

At the end of two weeks, four days of fasting and ten days of feeding, the second period of abstinence, with purgation this time, was undertaken. This time the patient experienced no marked hunger or other uncomfortable symptom, except an inability to sleep. The sugar disappeared at the end of the second day, and the other results were practically the same as during the first fast.

During the next ten days of feeding (three days of exclusive milk, and one week of anti-diabetic diet), the sugar reappeared in forty-eight hours, and the per cent did not go higher than 3 per cent, nor the quantity more than two quarts per day.

Towards the end of this period, the patient experienced considerable nausea and lack of appetite, the urine became deeply colored,

and the skin of the abdomen showed a slight but positive jaundice, the gall bladder area became tender and rigid, and the physical signs indicated a rapid enlargement of the liver.

Notwithstanding these untoward symptoms the patient insisted upon entering upon his third fast. During the fast of four days the quantity and sp. gr. of the urine lessened as before, but the sugar did not disappear, while the jaundice became more pronounced, the stools grayish, extreme tenderness developed over region of liver and pancreas, and the liver continued to enlarge. For six weeks (from February 15 to April 1) these symptoms persisted and the patient continued to lose ground.

Believing, now, that we probably had organic changes (cirrhosis or possibly malignancy) in liver and pancreas, which would render an unfavorable case into a practically hopeless one, all restrictions as to diet were removed and efforts directed merely towards sustaining the patient's strength and making him comfortable. Just at this stage this paper was concluded preparatory to reading it before the coming meeting of the State Society, and the essayist begs leave to add a few notes as to the subsequent history of the case.

About April 1 the jaundice and other hepatic symptoms began to clear up, and at the present time, May 15, have entirely disappeared, and the patient now appears to have only an uncomplicated diabetes.

Under the restricted diet, however, the quantity of urine had increased to $3\frac{1}{2}$ quarts per day, sp. gr. 1050, sugar 7 per cent, and the thirst had become very pronounced and troublesome. Hence, since April 1 we have tried the abstinence with purgation at fast nightly intervals. The patient derives considerable relief from his thirst, dryness of mouth, excessive urinary flow, etc., and usually comes out of the fasting period feeling somewhat refreshed.

He has also gained some flesh and strength since the jaundice disappeared. However, while the sugar is distinctly lessened, even after one day's fast, it does not now completely disappear during the four days' fast, and we cannot claim any permanent benefit or

promising evidence of cure. However, the patient is willing to undergo the fasts, in order to obtain the temporary relief following them, and the results obtained in this case would induce the writer to give the plan a thorough trial in a less advanced and more favorable case.

DISCUSSION.

DR. S. T. HARDISON, Lewisburg: I would like to offer one or two thoughts in connection with this paper. When Dr. Howlett started out I thought he was going to report a case of cure of diabetes, but was very much disappointed when he began to show us around the corner that this patient was like the rest of patients with this condition. I gathered this thought during the reading of this paper, namely, that during the four days of fasting, except the last time, the sugar disappeared considerably. Is that correct?

DR. HOWLETT: Yes.

DR. HARDISON: I think that is in harmony with what we may expect. When there is a brake put on, so to speak, by the interdiction of alimentation, then nature makes an effort to live on what is stored up, and in so doing it absorbs and appropriates the sugar with the balance of the material, and so soon as feeding begins again, the sugar begins to appear in the urine again. Now, there is an anomaly there with me. We have a wasting disease that is sapping the patient's life, causing rapid emaciation and a want of nutrition. When these patients are put to the stage of starvation we have simply a reduction in the sugar, but we do not have any other good symptoms. This is accounted for in this way: if the patients would starve all the while they might get better. It would be a pretty good thing if these patients could hang on to the fasting treatment, but they cannot do it.

While I have not had a very extensive, yet I have had considerable experience with diabetes mellitus in the last forty years, and have never seen a great brake put on the downward tendency of the patient to close his earthly mission. If there is any drug that has given benefit in the treatment of this disease, I do not know what it is. I am sure, if you cut out the saccharine matters and starchy matters which are convertible into sugar, and the patient can be kept alive on fatty matters, you can prolong his life. If you will alkalinize to begin with the ingested fatty matter, it will cause a diminution in the sugar and improve the patient's condition, but like all other treatments, the time comes when it is a failure and the patient goes steadily down.

The doctor has given us a very minute description of the disease, and a correct statement of his experimentation with the new treatment, be-

cause I am sure he has given it a faithful trial.

There is one thing about the patient that I would like to call attention to, and that is, the exhibition of sugar in the urine began by carbuncles. There was a blood dyscrasia before the appearance of the sugar, and what relation that has to the appearance of the sugar, I do not know, but that is unusual, and it does not happen ordinarily with patients who have diabetes. My experience has been that the younger the patient with diabetes the sooner he will die. The older the patient the longer he lives, and whether it is because the functions are impaired, or their activity retarded as the patient gets old, I do not know. I recall one child that went on to death very quickly, although dietary measures were carried out. I have had two or three patients that have lived for years. One imprudent man lived a long while with it. What connection there is between age and the disease, I do not know definitely, but younger patients are harder to keep alive than the older ones.

DR. WILLIAM LITTERER, Nashville: I am sorry that I did not hear all of Dr. Howlett's paper, therefore I cannot discuss his report. I wish to say, however, that diabetes is a very obscure condition. It is obscure from the standpoint of the etiology, in that there are possibly many different types of the disease. For instance, the pancreatic, the hepatic, the renal, the toxic type, and a number of others. A few years ago we had always considered diabetes an absolutely fatal disease, but later observations have proved that certain cases are amenable to treatment and that absolute cures have been obtained. Those cases that are caused by bacterial toxins especially come under that heading, particularly where the micro-organism can be isolated and an autogenous vaccine made. I have in mind three cases of typical diabetes within the last two years in which the specific micro-organism was isolated from the furuncles. An autogenous vaccine was made and the same was administered to the patients varying in the length of treatment from two to six months, with the result that cure was effected in these cases. I am not prepared to say whether the vaccines were entirely responsible for the cure or not, but I can say that distinct improvement commenced at the first injections of the vaccine. These three cases were absolutely typical cases of diabetes mellitus, in which they were getting rapidly progressively worse. The organism usually isolated was the staphylococcus pyogenes albus and aureus. I do not want to be misunderstood that autogenous vaccines will invariably effect a cure. On the other hand, I have had more failures than cures by treating with the autogenous vaccine. From the results obtained I am of the opinion that every case of diabetes mellitus with a complicating furunculosis should be given a full and systematic treatment with the autogenous vaccine. In true pan-

creatic diabetes, where the bodies of Langerhans are at fault, and in which the pyogenic organisms are not causing their destruction by their toxins, such cases are regarded as invariably fatal. The autogenous vaccine will do no good in such instances.

DR. HOWLETT (closing the discussion): As I stated in my paper, at the time I first thought of reporting this case, I had hoped to have a more favorable report to make. However, it struck me that in this disease for which we have no treatment that is curative, and none that has really been found practical or beneficial, any suggestions as to treatment which would make the patient more comfortable would be worth presenting. Hence I reported this case and its treatment.

In this case Dr. Litterer himself, in 1911, made an autogenous vaccine that was used on this patient for some time, not, however, with any view of curing diabetes, because at that time the sugar did not show in the urine, but it was used in an effort to stop the succession of boils. That was a feature of the case I had forgotten, until recalled by Dr. Litterer's discussion.

VESICAL CALCULUS, WITH REPORT OF CASES.*

By George R. Livermore, M.D.,

Professor of Genito-Urinary Surgery, University of Tennessee, Memphis, Tenn.

Stone in the bladder has been known from time immemorial, and even in ancient days patients suffering with it were successfully operated upon. In the Hippocratic Oath, the graduate was made to swear that he would not operate for stone in the bladder, but would refer the case to those specially fitted for this class of work.

Stone in the bladder may be either primary or secondary, single or multiple. A single stone may become multiple through spontaneous fracture due to changes in the specific gravity of the urine.

Etiology. In order for a stone to form in the bladder there must be a starting point, such as a blood clot, a mass of pus or mucous, a renal calculus, or a foreign body such as a piece of broken catheter. Diet also plays an important role, and those who eat rich, nitro-

*Read before the Tennessee State Medical Association, April, 1913.

genous foods and lead sedentary lives are especially prone to the development of stone in the bladder.

The decomposition of urine in the bladder, due to obstruction from enlarged prostate, stricture, atony and diverticula, all predispose to stone formation.

Symptoms. Stone in the bladder may exist for years and produce no symptoms, or at most only slight ones, but as a rule the following symptoms are present: Pain, frequent urination, tenesmus, sudden stoppage of the flow of urine during urination, sharp pain on sudden motion, or turning in bed. The pain may be referred to the glans penis, the perineum, or down the thigh. It is especially felt at the end of urination, while walking or being jolted. Blood, pus and mucous in the urine with blood especially occurring at end of urination.

Diagnosis. There are many methods of making a diagnosis of vesical calculus, but none of them can compare in accuracy to the cystoscope. Failure to find the stone with the cystoscope is not the fault of the instrument, but may be due to carelessness of the operator, cloudy or bloody fluid in the bladder, or a poor lamp in the instrument. Once a stone is seen with the cystoscope, the diagnosis is certain. Digital examination per rectum may aid in making a diagnosis, especially in children.

Thompson's searcher is another instrument used in diagnosing a stone, and where it can be made to touch the stone the peculiar click of the metal against the stone is characteristic. When the stone is encysted, or when in a urethral orifice, or when the prostate is hypertrophied, the searcher will not touch it, and in these cases the cystoscope is invaluable.

* The treatment of vesical calculus is preventive and curative.

The Preventive Treatment. Persons suffering from uricacidaemia should guard against the use of nitrogenous foods, sugar or fat. They should drink large quantities of water and take regular exercise. If the urine is strongly acid, or there is a deposit of uric acid in the vessel, an alkaline diuretic is indicated. If phosphaturia is present, mineral acids and bitter tonics tone up the digestion

and aid metabolism. Phosphatic calculi are often caused by decomposition of residual urine. In order to prevent their formation, the conditions that cause residual urine, such as stricture, hypertrophied prostate, etc., must be cured. It is foolish to attempt to dissolve a stone with mineral waters or medicines, for no method has yet been found that is capable of dissolving a stone in the bladder.

The curative treatment is operative.

Litholapaxy, or crushing the stone and immediately washing out the fragments from the bladder, is the method of choice in the hands of those specially trained to do it. In the hands of the general surgeon, however, removal of the stone by suprapubic cystotomy or perineal section is far less dangerous.

For the successful performance of litholapaxy, the lithotrite and the evacuating catheters must enter the bladder easily and the stone must be movable, of moderate size and not too hard.

Contra-indications for the use of the lithotrite are pronounced prostatic hypertrophy, tight stricture, marked cystitis, contracted or markedly irritable bladder, nephritis and suppuration in the kidney. Perineal lithotomy is said to cause less shock than suprapubic and the drainage is good, but the tissues are often bruised in removing large stones and sloughing may result.

Suprapubic lithotomy possesses the following advantages: The entire bladder can be inspected, injury of structures at neck of bladder is avoided, and it is especially suitable in cases of hypertrophied prostate and encysted stone.

Case Reports.

A.A. Age, 36; white, male. Has had gonorrhoea for past ten years. For past year and a half has suffered with frequent painful urination. Gets up four or five times every night to urinate. When he stoops over or turns in bed often has sharp pain in bladder. Urine contains blood, pus, gonococci, mucous and epithelial cells. Cystoscopy shows stone size of half dollar in bladder. Operation, suprapubic cystotomy, 7 day drainage. Cured. No gonococci found since operation.

M.W. Age 61, white, male. No venereal history. Has suffered with frequent painful

urination for years. Has had to get up once or twice at night for past two years. More often during past few months and recently has to void urine every few minutes. Urine contains pus, blood and mucous and epithelial cells. Cystoscopy shows stone size of hickory nut and middle lobe of prostate enlarged and projecting into the bladder. Operation suprapubic cystotomy. Removal of stone. Prostatectomy; three-day drainage. Cured.

S-R. Age 28, white, male. Was catheterized following operation for hemorrhoids April, 1912, and ever since has suffered with frequent painful urination. Has grown much worse during past few months till now suffers constantly and has to void every few minutes and tenesmus is marked. Urine flows freely at times, then stops suddenly. Urine is cloudy and contains pus, blood, mucous and epithelial cells. Cystoscopy shows stone size of small hickory nut in bladder. Operation cystotomy. Removal of stone, five day drainage. Suprapubic, cured.

DISCUSSION.

DR. L. E. BURCH, Nashville: This is a very interesting subject, and one that we sometimes overlook at the bedside. It is the custom in many instances to be called to a case, or a patient will consult us for frequency or pain during urination, and we tell the patient he has a cystitis; we give him urotropin, salol, or some urinary antiseptic, and pass him on. I really know of no condition that demands more careful examination or a more careful history-taking than a case that presents with frequency of urination and painful urination. I have made the statement before that there is no such disease as cystitis. It is a symptom of another disease. It may be from a stone in the bladder, from an enlarged prostate; it may be from a tumor or ascending infection, gonorrhea, or descending tubercular infection. Many other conditions could be mentioned. In making a diagnosis we must begin from below and go up. It is absolutely necessary, first, to eliminate any urethral trouble. If we eliminate that, it is necessary to go to the bladder and eliminate trouble from that source. Then, if we can eliminate trouble from the bladder, we must go to each ureter and to each kidney. Stone in the bladder is not as common at the present time as it used to be. I do not know why it is the older surgeons had a run of these cases. At the present time, I don't believe most of us would average here in this city more than five cases in a year. I am not able to account for that in any way.

I have never had any experience in removing a stone from the bladder, except by opening the bladder. I have never resorted to lithopaxy, although expert genito-urinary men seem to think that is the ideal method, and I suppose it is, but as Dr. Livermore has stated, it is best to remove the stone by suprapubic or perineal lithotomy.

Dr. Kelly, in a paper before the recent meeting of the Southern Surgical and Gynecological Association, made the statement that in doing a suprapubic cystotomy we should make the incision transversely, and also a transverse incision through the fascia. I have used this method a number of times, and I really believe it is superior to making the old incision up in this way (indicating). It gives you an ideal view of the bladder. I have made use of this incision not only for removing stones from the bladder, but for suprapubic prostatectomy, and it is one I can thoroughly recommend.

Another step in the technic, which is of vast importance in doing suprapubic cystotomy, is to dilate the bladder with air. By that means you eliminate many of the dangers of sepsis in the space of Retzius, and I believe it is much better to make the incision high up in the bladder rather than low down. You will find these wounds close earlier.

DR. T. HUGH CARTER, Memphis: Six months ago I had a case in which we could not find a stone, nor was there any evidence of stone from the history. Finally an examination was made with the proctoscope, and we found a large stone in the prostate gland, and removed it through the rectum.

I saw another case with Dr. Lawrence of Memphis, in which there were two stones diagnosed by means of the X-ray. The cystoscope showed one stone in the bladder, and the X-ray showed another below in the neck of the bladder. The X-ray was of great value in this case, as it revealed a stone when the cystoscope would not show it.

DR. S. M. MILLER, Knoxville: One gentleman, in discussing this paper, said he had observed that the older practitioners had a great deal more work of this kind than appears now. I have wondered if this were not due to the character of water that is being used by our people. In the eastern end of the state we have three main geological tracks. In the southern part of the state we have the granite region, which takes in the Carolina border and the Blue Ridge range. The geological section just north of this is limestone, and north of that comes the clay-bearing strata with slate formation, and it is noticeable that the greater number of cases of lithiasis came from the limestone region. In all these sections we find the habits of the people with reference to drinking water have changed very materially within the period of our observation; that whereas formerly they used drinking water from

springs saturated with lime salts, now they use cistern water and river water, which is largely diluted. I have wondered if this did not have something to do with the lessening of the frequency of stone formation in the bladder.

DR. W. D. SUMPTER, Nashville: I rise to speak more particularly in regard to the value of the X-ray in calculi. I have not had the good fortune to make many X-ray diagnoses of kidney stones, gallstones, ureteral impactions, or vesical calculi, for it has been my misfortune to find soft, non-resisting elements in the stones I have removed.

As to the diagnosis of stone in the bladder, with our facilities for examination today there is in every community an expert or competent man who can use the cystoscope for exploration of the bladder. I do not think every man has that ability; I do not possess it myself; but some men are so expert that an examination of the bladder with this instrument becomes an easy means of diagnosis. Where one is not an expert, such an examination should be entrusted to some one else.

If you have not undertaken catheterization of the ureter, you have something great in store for you in your first attempt. We do not have to do this in cases of loose stones in the bladder, but sometimes a stone is embedded in the bladder wall, the ureter holding it as it is ready to pass through. It is essential in that case to explore the ureter.

The point with reference to examination of the rectum is the only other one that I will mention. Given children who have bladder symptoms, whether symptoms of nocturnal loss of urine or not, the bladders of those children are not functioning properly, and it is a very satisfactory thing sometimes to introduce the little finger into the child's rectum. There is no baby's rectum so small that any man is not able to pass his little finger into it and feel the bladder and see if there is a stone in it. Any child's bladder can be felt with ease by bimanual rectal examination, and a stone determined if it is present, and if this cannot be done because of muscular rigidity an anesthetic should be given.

DR. PERRY BROMBERG, Nashville: I specially desired to hear this paper and regret very much that I did not on account of attending the meeting of the House of Delegates, because it is a subject in which I am very much interested.

The art or science of cystoscopy is not difficult to acquire, and certainly a person should not be permitted to carry a stone in the bladder for any great length of time, when it can so easily be diagnosed by the simple introduction of the cystoscope. I have, within the past two weeks, had the pleasure of seeing two rather interesting cases of stone in the bladder. One was a patient sent to Nashville to a friend of mine with a diagnosis of acute retention of urine from spasm of

the urethra, or rather stricture of the urethra. A local physician made an effort to pass the catheter and was unsuccessful. The physician told me he sent to an adjoining county to get another doctor. While the doctor was away the patient introduced an umbrella rod into the penis, and lacerated the urethra to such an extent that no one could get in. The pathology in this case, as shown by suprapubic cystotomy, was a small stone in the bladder plugging the posterior urethra. The patient had no stricture of the urethra at all. Urethra was patulous. After relief the patient succeeded in passing urine naturally through the penis. The small stone in the posterior urethra was removed and drainage established.

I would caution the physicians in the rural districts against the promiscuous effort at catheterizing patients without first thoroughly preparing them.

So far as spasm of the urethra is concerned, I am firmly convinced that the mere introduction of the catheter into the urethra is a sufficient excitant to cause contraction. It will prevent the introduction of any ordinary instrument, but if you are going to catheterize a patient for acute retention, introduce enough of a local anesthetic into the urethra, and I recommend a four per cent beta-eucaine lactate solution, which is non-toxic. A dram of a four per cent solution of this can be introduced into the urethra, and with this, liquid paraffin, 15 or 20 drops of adrenalin will relax the spasm so as to enable you to get into the bladder.

The second case was one of impacted stone at the mouth of the ureter just at its orifice into the bladder. This was relieved by introducing the ureteral catheter into the orifice of the ureter and injecting liquid albolene into the ureter, this exciting spasm of the ureter, and lubricating the outlet, so that the stone was almost under tension. The patient was relieved of pain immediately she left the table.

There is no reason for us not to make a diagnosis of stone in the bladder since the cystoscope has been perfected to such a degree as it has. Of all conditions of the bladder it is the easiest one in which to make a diagnosis of stone. It is true we may get unusual cases such as the two illustrated in which the diagnosis may be difficult, or the conditions such as to render examination somewhat difficult.

Relative to the location and composition of the stones mentioned by Dr. Sumpter, namely, that iron is found in these stones, I do not think we have stones with that composition. The majority of stones in the bladder are secondary to stones from the kidney, and I believe we should always take into consideration the point that a patient who has a stone in the bladder is likely to harbor one in his kidney, and these patients should be subjected to radiography of both the

kidneys to determine that fact. We should not forget the further fact that 25 per cent of the cases of hypertrophy of the prostate are accompanied by stones in the bladder. If we get old men suffering with hypertrophy of the prostate, one in four carries a stone in his bladder, so that stone in the bladder should be suspected and we should make an effort to relieve the patient of that doubt at once, for the reason that it is found so frequently in these conditions. We are told that children are frequently sufferers from stone in the bladder. It has not been my experience in the last five years to recall more than two cases in children. The majority of my cases have been in adults and old men. I would like to lay stress on the importance of cystoscopy in the diagnosis of stones in the bladder.

DR. MEDLING, Dyer: I had a rather interesting case along that line of a little fellow two years of age. I was called to see him about 11 or 12 o'clock at night, and was not prepared to make a diagnosis of stone in the bladder. I did not have a catheter with me. They did not suspect stone, or, in fact, they did not suspect anything. The little child was playing with its privates, and they thought it was rheumatism and sent for me for that purpose. I told them it was not a case of rheumatism. I told them that I would return the next morning and be prepared to catheterize the child. I inquired into the history of the case and asked them if the kidneys had acted that day, and they did not know. I asked them if they had acted that night, and they could not tell about it. I returned the next morning and found the little fellow had passed a stone during the night. The parts were very much swollen, especially the testicle and penis, so much so that I could not pass a catheter. The kidneys had acted some, but I did not know just exactly how much. I made an attempt to pass a catheter, but failed. We waited a short time, and by afternoon gangrene began on the penis and testicle, and I did not try to do anything then. I did not know whether this stone which the child had passed had injured the parts enough to cause the swelling or not. As there was nothing to do, I waited. The gangrenous condition continued until I thought the little fellow's penis was going to slough off. This gangrenous condition spread over the testicle. The little patient was a negro. The skin of the penis and scrotum sloughed off, so that the condition was very peculiar. It put me in a very embarrassing position, because I could not do anything but wait. The next day a fistulous tract opened up just above the symphysis and urine escaped through that for several days, after which the urine re-established itself through the penis.

DR. E. T. NEWELL, Chattanooga: With reference to limestone water: in Louisiana, where I practiced for some time, the people who drank nothing but cistern water scarcely ever had a

case of stone in the bladder. We did not see one case a year down there, and my colleagues have had the same experience.

The cystoscope is of great value as an aid in diagnosis, especially in the hands of a capable man. The X-ray, however, is a simpler and quicker method. You do not have to prepare the patient, and in a minute or two you have got the stone. In a majority of cases the stone will show. Ninety per cent of them are kidney stones.

I would like to ask the author of the paper whether he ever uses a self-retaining catheter in these cases where there is no pus or very little pus, and whether he considers it advisable to sew up the wound in the bladder suprapubically and does he use catgut?

DR. SEVIER: I would like to report a case in connection with this paper. A negro man, fifty years of age, had gonorrhea with a stricture resulting. He allowed the stricture to close up the urethra without treatment. He made persistent efforts to pass urine, but could not do so. He ruptured the urethra in the perineum. The patient was treated by Doctor Hay for ten days for typhoid fever, without catheterization. Another doctor was sent for at the end of that time and treated him for another ten days. In the meantime, the urine had followed the fascia, as it did in the case reported, until infiltration in the cellular tissue reached the mucous membrane of the glands, it came over the pubic bone and discharged through a gangrenous opening in the scrotum following the fascia, until there was a cataract of urine pouring over the pubic bone. The entire skin of the penis and ring around it sloughed off, and the urethra was entirely closed so that no instrument could be passed through it. The result was I performed perineal section, put in a double drain, and instructed the physician in charge how to treat the case afterwards. He neglected to follow my instructions, and the result was the drain filled with alkali and the calculi had gone all around so that the urine began to pour over the pubic bone again. The double drain was withdrawn and the wound ready to close. The poor devil got well.

DR. LIVERMORE (closing): Some of the points brought out are very valuable. The case reported of extravasation in the negro points to the necessity of early diagnosis and the hurrying of these patients to a hospital as soon as symptoms of that nature develop.

In regard to the remarks made by Dr. Sumpter about iron formation in these stones, I would simply say to Dr. Bromberg that this remark or suggestion is not to be taken seriously.

In regard to Dr. Newell's suggestion about drainage: I never use the self-retaining catheter, as drainage through a tube is very satisfactory. Sometimes you drain for three days, sometimes longer, depending upon the amount of cystitis present.

CHRONDO MULTILOCULAR CYSTOMA, WITH REPORT OF CASE.

By P. H. Faucett, M. D.,
Columbia, Tenn.

The rarity of this loculated mixed cystoma occasions at least a report; for from observation, study and the resource to modern literature, I find such tumefactions, or cystic degeneration hardly more than referred to as late as 1909.

Thus the pathology I find for such growths is meager. The reports show that they are more or less benign than malignant and when removed, seem to have no tendency to recur.

The location of these tumors is found in both the upper and lower jaws, or strictly speaking, they arise from the alveolar processes of these bones and from the enamel of the teeth.

I may say here that solid central epithelioma or adamantoma have about the same pathology, and are almost equal as to their rarity. Both these tumors have their origin in the enamel organ of the teeth and in the alveolar process.

The latest and most authentic report I could find was Perthes in Eisendrath's Surgical Diagnosis; he having collected only fourteen cases up to 1909. Nine of these cysts affected the lower jaw and the upper having the remainder, so we find this condition about twice as frequent in the lower jaw than in the upper.

Dentigerous cysts must be differentiated from this form of cyst, though small usually form sarcoma and are most often seen between the ages of seven and fourteen, appearing with the completion of their permanent teeth.

This multiple cyst may, as I say, be only one occurring in the jaws. The surface of these is often quite thin and parched like.

For differentiation I will say that neither simple or dentigerous cysts ever attain the size of these multilocular cysts. These latter tumors grow slower than do those of sarcoma

and cause really less irregular expansion of bone and a discriminating feature is that it leaves the mucosa intact.

The reason I am drawing a few comparisons for differentiation is that these cysts grow to enormous size sometimes and when the wall is tense, so much so as to discard fluctuation, palpating and from the appearance and size, sarcoma may be suggested and accepted and the poor sufferer given no encouragement and left to be consoled only by narcotics and the patent medicine nostrums.

I fear I am departing from my subject, for in reality this was supposed to be only a case report, but to bring out a discussion I have simply supplemented my report with this meager history, pathology and the surgical significance of this form of growth.

Case Reports.

Woman, age 35 years. Her attention was called to a small enlargement of the jaw twelve years ago. After several months she noticed that it was growing and displacing her teeth inward, so she consulted a physician and removal was advised. The growth was removed, this being eleven years ago.

Patient stated that at that time growth was about the size of an English walnut; had given her no pain nor inconvenience, though it seemed to be growing rapidly.

About ten months ago she noticed it was returning and after a few months it grew rapidly, though she felt no pain, had had no bleeding and when she consulted me there was no evidence of its having become ulcerated.

At the time of my first examination I couldn't elicit any eggshell crackling, but she said she had felt it very plainly some months before. Her reasons for consulting a doctor were for the pain she was suffering; neuralgia of the infra-orbital nerve from pressure. I advised operation after examination, but was refused; patient stating all she wanted was something for her headaches.

Probably after going the rounds, as these patients ordinarily do, she came back to me the latter part of February, suffering from pressure symptoms greatly. Her eye was bulging, ears prominently standing out, making the face look quite distorted. I advised

*Read before Tennessee State Medical Association, April, 1913.

operation for relief of the pressure, though I did not feel that I could promise her much.

At this time there was no ulceration of the mucous membrane, though the two lower molar teeth were markedly pressed inwards, lying almost horizontal. I feared epulis or giant cell sarcoma. Patient consented to operation.

The incision was made along the horizontal portion of the jaw and after pressing everything down to the sac, I pressed my finger around it, but was unable to move it toward the incision. The facial artery was retracted and left intact, so I had practically no hemorrhage.

After failure to deliver the cystic growth, as it proved to be, I inserted a tube and drew off the contents of the larger one. The smaller ones were split and the whole sac was pulled through the opening of the skin and cut away down almost to the bone and the bone chiseled to make as smooth as possible, the base of cysts was heavily curetted, and in the whole doing as complete an operation as possible without disarticulating; resecting the right half of inferior maxillary. The wound was partly sutured; that is, the upper half, and the resulting cavity packed with gauze. The gauze was removed forty-eight hours later and I had some granulating surface and the final result was, I believe, a good one. The cavity filled up and the fistula closed, and the patient had but little disfigurement, both in scar and contour of face.

The question now is: whether or not there will be a recurrence or filling up again of this cyst? I really think not, though the lower inner portion of the expanding alveolar process was left to keep the cheek from falling in as a cosmetic effect was desired if possible, and I believe I had good results, a grateful patient, and without the mutilating resection operation.

Discussion and Conclusion.

Doubtless some may doubt the chondroma tissue found in the growth, nevertheless it could clearly be seen and as the cartilaginous portion of the alveolar processes made up a portion of the sac, I have called this cystic myoma a chondro multilocular cystoma. The

age of the patient discards the idea of dangerous cysts, the history excludes sarcoma and the operation denies epulis.

This, to me, was a most interesting case and well worth reporting.

DISCUSSION.

DR. JERE L. CROOK, Jackson: This subject is interesting, and the condition the author describes is rather unusual. About a month ago I operated on a patient in which the tumor involved the upper jaw. As a rule, these cases are not satisfactory. The vast majority of tumors around the jaw eventually become malignant, and even at the time the patients present themselves for operation these tumors are frequently malignant, and in order to remove the growth it is necessary to do a very thorough operation to achieve permanent success. From a cosmetic standpoint, it is difficult to do a radical operation without doing damage to the countenance. These operations are very unsatisfactory from the standpoint of the patient if they leave the face mutilated. When it comes to removing a large part of the upper jaw, leaving the face in a proper cosmetic condition, we had in the operative treatment the highest type of so-called plastic surgery. Some wonderful results are being achieved at present in this class of cases, due largely to the fact of our modern knowledge of bone grafting, what we can do by resection and transplantation, and using various types of prosthetic apparatus. We have reason to hope that we may in the future be able to remove large portions of the bony framework of the face with better cosmetic results than at present.

DR. J. W. BRANDAU, Clarksville: I would like to congratulate the essayist on the success he has met with in the treatment of this patient, but there is one point I think we ought to emphasize, and that is to educate these patients in regard to the danger of osseous growths about the face and jaws, and the importance of early operation. We ought to educate our patients to have these tumors removed early before they become so large that mutilating operations are necessary.

DR. FAUCETT (closing): As I said in the beginning of my report, these growths are so exceedingly rare according to my search of modern literature, that I felt justified in reporting this interesting case.

I appreciate very much what Dr. Crook has said for the simple reason that he has had more experience than I have. This is the first growth of the kind I have ever seen, and while it may prove to be more malignant than benign, yet these cysts are more benign than malignant according to textbooks.

I was afraid some one would take issue with me by saying that they do not see why I should call it a chondro-cystoma, as most all of these tumors of the jaw are either chondro-fibroma or chondrosarcoma. It was plainly evident there was chondral tissues in the sac of the cyst. I simply added the prefix chondro to the multilocular cystoma. This was such a rare form of cyst that I thought it well worth while to report the case, and I hope at some future time to hear more from this. I do not believe I have ever read a paper in the literature on this form of tumor.

As Dr. Crook has said, in the last few months or two years, there has been a good deal of plastic surgery done, such as bone implantation, and it is to be hoped that great benefit will result from this work in operating on patients in the future.

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EDITORIALS**LAW AND PROSTITUTION.**

For a great many years the question of regulating prostitution and the prevention of venereal diseases has occupied the minds of the profession and a rather small element of the interested public. But seemingly all of the proposed plans have proved to be more theoretical than practical for the reason, as we think, that they all failed to recognize the prostitute as a human being instead of enlisting her cooperation and putting her in an attitude of defense against apparent persecution or prosecution.

Dr. G. Shearman Peterkin, of Seattle, Wash., who has given the subject much study, has in a recent article read before the King County Medical Society, approached this intensely intricate problem in an attitude of regard or fairness to the prostitute which commends itself to the writer.

Dr. Peterkin, after making a careful analysis of conditions, offers some practical suggestions for the prevention of the three principal problems presented by prostitution, viz.: corruption of the police; prevention of venereal diseases; misdemeanors; (obscenity, drunkenness, public solicitation, etc.). In our opinion he very correctly tries to deal only with the material evils of prostitution and eliminates the moral side of the question. Any effort to combine the benefits will necessarily detract from the other. We must come to realize that prostitution has existed from time immemorial and will continue to exist indefinitely, and our efforts to be of much practical benefit should be directed towards the evil of prostitution and not against prostitution itself.

Dr. Peterkin abolishes police corruption by abolishing police authority and transfers such

authority to a board of scientific morality to be comprised of a lawyer, a physician and a business man. This court, to be selected by the Bar Association, the Academy of Medicine and the Chamber of Commerce or Board of Trade, shall preside over all cases accused of immorality. The duties of this board are many. They are, to try all cases, exclude the public, protect the reputation of the accused by the strictest secrecy, collect and compile data relating to prostitution, publish literature bearing upon the hygienic phases, distribute information where they think best, exercise control over restricted districts or houses located elsewhere and adopt such rules regulating the number of prostitutes who may live in one house or even in one city, the rents required of them, and put a stop to the excessive tax levied upon these unfortunates by blood-sucking property owners. The requirements of proper prophylaxis, instruction in their use, and the levy of a tax to be deposited in a bank and to be used by the individual when she becomes infected.

There are many excellent suggestions in Dr. Peterkin's article, and to us it seems that a real step has been taken in advance for the subject has been approached in a humanitarian manner.

"QUALIFICATIONS OF THE SURGEON."

At the recent meeting of the American Medical Association, our President, Dr. W. D. Haggard, who was Chairman of the Surgical section, selected this subject for his address and that it was a popular one is evidenced by the wide publicity given to it both in the lay and medical press. The Journal of the American Medical Association makes it the leading article in its issue of July 19, and several of the state journals have given the address editorial notice. Dr. Haggard unquestionably told some very plain truths concerning the practices of some surgeons: he especially condemned the all too common practice of incompetent operators attempting surgery for which they have had no training and the performance of unnecessary operations, either for the practice or a fee. His words should have a decided influence in

helping to destroy the commercial spirit that seems to have possessed at least a large number of the profession in recent years.

Dr. Haggard very correctly says "that the first requirement of the surgeon should be a conscience. It should be his constant mentor and the great arbiter of those momentous decisions which come daily to those who combat disease and death and whose efforts are so far-reaching in the preservation of life and in the science of humanity." With due regard to the many other valuable suggestions which he has given in his paper we are content with his first requirement. Give us a man who has a conscience and we will give you one who will not stoop to operate for a fee or attempt to do surgery for which he is unfit.

THE CONSERVATION CONGRESS.

The Conservation Congress which convenes in Knoxville in September will have a splendid representation from the health departments of the State. The various county and State boards will cooperate with the State Board of Health in maintaining a worthy exhibit illustrating what is being done for the improvement of health conditions in Tennessee.

No small feature of this exhibit will be the baby welfare exhibit which will be under the direction of Miss Lathrop. Miss Babbitt, chief of the Department of the Sage Foundation, will be on the ground. The profession of the State are urged to aid the various boards who are arranging exhibits in every possible way.

WOMEN AIDING IN HEALTH WORK.

One of the biggest health movements ever undertaken in America, it is interesting to note, is now enlisting the earnest support of the women of this country. It is in fact more or less depending upon their support. This movement is an effort to improve the health and efficiency of our 20,000,000 school children, and the co-operation of the women of America is being furnished in a number of ways, namely, as school teachers, again as physicians and nurses, as mothers, and still again through those numerous organizations

in which women play an important part—organizations like the school improvement association, the parent-teachers' association, school boards, mothers' congresses, and the several thousand women's clubs of the General Federation of America.

In Buffalo the last week in August a special feature on the program of the Fourth International Congress on School Hygiene will be a session organized under the direction of Mrs. S. S. Crockett, of the General Federation of Women's Clubs of America. Mrs. Crockett is Chairman of the Public Health Department of the General Federation which is now calling attention to the serious importance of the Buffalo gathering.

In this connection it might well be said that no particular field of work in the line of health improvement offers a better opportunity possibly than a movement for the betterment of the schools of today. No problem is more vital to the mother certainly than the care and protection of her children while they are beyond her sight. All children go to school, but the conditions under which they go to school—are they what they ought to be? Is the school room properly heated? Is it properly lighted? Is it well ventilated? Are the sanitary conditions surrounding the schoolhouse such as they ought to be? Are the other school children carriers of disease? Is the school session too long? Is the mental condition of the school children taken into consideration when it comes to the hours of study? These are questions which can be asked by the women of any community.

To the women of the country the Buffalo Congress is important, because it will give them the result of research work carried on in all the leading nations. It will give them the best methods of work for their own individual communities. One of the objects of the Buffalo Congress is to make known the best ways of improving the health of school children.

MARRIAGES.

The marriage of Dr. H. M. Tigert to Miss Leila Shute, both of Nashville, took place at Christ Church July 23.

News Notes and Comment

Dr. A. F. Richards, of Sparta, was recently in Nashville.

Dr. J. G. Bridges, of New Middleton, was recently in Nashville.

Dr. E. D. Watkins, of Memphis, will spend the month of August in the Carolina mountains.

Dr. N. J. Minter, of Chattanooga, announces the removal of his office to the Bate's Block.

Dr. Jas. E. Green, of Chattanooga, has moved his office to corner Market and Main Streets.

Dr. E. C. Matthews, of Trenton, underwent a slight operation July 26 at a Nashville infirmary.

Dr. Elizabeth Kane, of Memphis, will spend the month of August in Cleveland at Crile's Clinic.

Drs. E. C. Ellett, M. Goltman, Percy Wood and M. Haase, of Memphis, will spend several months abroad.

Drs. E. T. and Dimbar Newell, of Chattanooga, recently lost their brother, who died after a short illness from typhoid fever.

Dr. G. Victor Williams, of Chattanooga, announces the removal of his office to the Van Deenan Building, corner of Eighth and Market Streets.

Dr. Jas. H. Atlee, of Chattanooga, is spending the summer at Harvard and Boston, visiting the leading hospitals, and will not return until Sept. 1.

Dr. and Mrs. John A. Witherspoon, of Nashville, left July 19 for Nauheim, where Mrs. Witherspoon will remain while Dr. Witherspoon will attend the International Medical

Congress in London, England. They will return home about September 1.

Dr. W. G. Kennon, who has recently located in Nashville, announces to the profession that he has opened offices at 301-307 Eve Building, Nashville.

We regret to announce that Dr. Sam White, of Franklin, is suffering in a Nashville hospital with an infection in one eye. We trust the Doctor may soon recover.

Dr. and Mrs. W. S. Lawrence, of Memphis, sailed from Montreal for London, England, July 26, where Dr. Lawrence will attend the International Congress of Medicine.

Dr. I. H. Long announces the opening of his offices in Chattanooga, second floor Van Deenan Building. The doctor will limit his practice to eye, ear, nose and throat.

The staff selected for the Baptist Hospital of Memphis for the year 1913 has just been completed. Dr. E. M. Holder was elected President; Dr. P. W. Toombs, Vice-President and Dr. A. G. Jacobs, Secretary. The following appointments were made: Surgery, Drs. E. M. Holder, Max Goltman, L. W. Haskell and Robert Mann; medicine, Drs. Louis Le Roy, R. S. Toombs, W. T. Swink and O. S. Warr; children, Drs. A. G. Jacobs and E. C. Mitchell; ear, nose and throat, Drs. Richmond McKinney and Louis Levy; eye, Drs. E. G. Ellett and Robert Fagin; neurology, Drs. G. G. Buford and W. G. Somerville; gynecology, Drs. J. M. Maury, E. D. Watkins and W. H. Pistole; obstetrics, Drs. E. W. Toombs and W. T. Pryde; tropical medicine, Dr. William Krauss; pathology, Dr. H. T. Brooks; orthopedics, Dr. W. C. Campbell; genito urinary, Dr. George R. Livermore; skin, Dr. Marcus Haase. The work of the institution has been materially improved in spite of the various handicaps, which have been overcome by the staff. The maintenance of a charity ward which has been instituted by the staff is now an assured department of the hospital.

County Society Proceedings

HAMILTON COUNTY.

The 760th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society met in regular session June 27, 8 p. m., at their regular meeting place.

The meeting was called to order by President H. P. Larimore with the following members present: Doctors T. E. and Y. L. Abernathy, Holtzelaw, D. N. Williams, Hillas, Woolford, Travis, Gentry, Stapp, Haymore, E. T. and Dunbar Newell, Brooks, Winters, Watson, Hochstetters, Wallace, J. W. Johnson, W. G. Bogart, Reisman, Blackwell, Meacham, Cobleigh, Wert, Wilson, Albert Broyles, J. M. Broyles, Yarnell, Fowler, E. B. Anderson, Ghee, Cheney, Larimore, Allen, G. Victor Williams, Haskins, McQuillan, Wm. Bogart, Faneher, Wise, Williamson, J. B. Steele, Hilliard.

Visitors present were Drs. Long, Randall, Wills, Dixon, Duncan Eve, Jr., Wright and Roberts.

Dr. Wallace reported favorable termination of his case of toxemia of pregnancy which was so liberally discussed at last meeting.

Dr. Cheney had a most interesting clinic of tuberculoma in a child eleven years of age which was discussed by Drs. McQuillan, Wert and Williams.

Dr. Haskins reported a case of strangulated ventral hernia which was discussed by Dr. Duncan Eve, Jr.

Dr. W. J. Winters reported a case of cerebro spinal meningitis.

Dr. E. T. Newell reported the case of Dr. Taylor and asked for subscription to purchase a fan for him, which resulted in a collection of \$12.50, which was turned over to the treasurer.

Dr. Duncan Eve, Jr., of Nashville, being the guest of the society, read an interesting paper on "The Treatment of Wounds," which brought out an extended discussion by Drs. Haskins, Holtzelaw, Dunbar Newell, Faneher, Long, Woolford, G. Victor Williams, Wert, Roberts, Cheney, Watson and E. R. Anderson.

Discussion was closed by essayist, Dr. Duncan Eve, Jr.

Dr. W. H. Cheney presented a clinic of a boy eleven years old, who on September last complained of mild headache which gradually progressed in severity until September 22, when it became necessary for the patient to remain in bed. At first the headache was frontal, nearly continuous, and at times unilateral in the region of the supra orbital ridges gradually merging into periodical paroxysms which occurred twice daily at about 10 o'clock a. m. and 3 o'clock, p. m., lasting about an hour. Each of these exacerbations was followed by the so-called cerebral vomiting after which the patient peacefully slept a period of fifty minutes.

These lancinating supra orbital attacks gradually shifted to the occipital region, and about the 3d of October the patient complained of inability to see, especially when raised quickly to an upright position. This loss of sight progressed until the patient was totally blind. He complained of vertigo and inability to hear in the right ear and tinnitus aurium was also complained of. His olfactory sensation was very acute, he being able to detect odors when the other members of the family could not. Patient had forced movements of the muscles, especially the muscles of the feet. Paraplegia is present, however, the right side is more involved than the left. We observe that he has no ankle clonus and the Babinski sign is present to a slight degree; patellar tendon reflex is absent. Astereogenesis is not present and there are no anesthetic areas. - Diagnosis—Tuberculoma.

Discussion.

Dr. E. B. Anderson suggested that it was a tubercular meningitis and advised a decompression operation.

Dr. Duncan Eve, Jr., believed it was cerebral tumor and agreed on a decompression operation. He inquired as to choked disc.

Dr. J. W. McQuillan thought the lesion was in the crura or pons. He said the tuberculomas are often associated with fluids. The thing to do is to try to locate the neoplasm, which in this case he thinks is probably basic. A tumor below the optic radiation does not

have so much choked as a pale disc. He did not think operation offered much hope owing to the location.

Dr. B. S. Wert considered the case of tubercular origin and thinks he had a tubercular meningitis which probably also involved the cord. He thought operation might prolong life a little, but would not cure him.

Dr. Winter reported a case of cerebro spinal meningitis. Patient was in coma when seen. He made a lumbar puncture and made a microscopie test of the fluid. He gave two injections of anti-meningitis serum twelve hours apart, but temperature continued to rise and patient died in twenty-four hours.

Dr. J. B. Haskins reported a case of ventral hernia with intestinal obstruction. Patient aged 47 and very anaemic in a state of shock when he entered the hospital. The hernia was caused from a stab wound to the left and slightly below the umbilicus, which was inflicted 20 years ago and necessitated at that time repair of several perforations of the intestines by Drs. Wells and A. W. Boyd. During these twenty years he has had four attacks of abdominal colic. Present attack began two days ago by acute abdominal pain, vomiting and general tenderness with no bowel movement. He had fecal vomiting soon after entering the hospital. On admittance his temperature was 95 degrees. Pulse 110. Operation showed complete obstruction at hernial opening and the intestines were in a mass of adhesions, which were promptly broken up and the obstruction relieved and the abdomen was closed with through and through stiches. Patient rallied from the operation, but as the intestines did not bleed when punctured with the needle and was very dark in color it is thought likely that gangrene will supervene.

Dr. Duncan Eve, Jr., of Nashville, Tenn., being the guest of the society read a very interesting paper on the treatment of wounds.

Discussion was opened by Dr. J. B. Haskins, who stated that he had been in the habit of using a great deal of bioloride solution in the treatment of wounds. He complimented Dr. Eve on his interesting paper and thanked him in behalf of the Academy of Medicine and Hamilton County Medical Society for

coming to Chattanooga and reading his interesting paper.

Dr. Dunbar Newell stated that he used nothing but tincture of iodine on all wounds, industrial and otherwise. Thinks it is simplest and best and agrees with Dr. Eve about washing wounds afterwards with alcohol. He discredits carbolic acid, bioloride of mercury and peroxide of hydrogen for irrigation. He thinks best to just wipe out pus and leave alone.

Dr. Long believes in very little irrigation in eye and ear work. In active infections of the ear he believes a small drain in the ear after being cleansed manually gives better results than irrigation.

Dr. Holtzelaw classifies them first as prevention of sepsis and second as treatment of sepsis. He has used benzol for six years in preference to alcohol and tincture of iodine. Benzol does not injure the tender skin. In suppurating wounds he used 1 per cent solution of iodine in benzol. Benzol (Merck's) is much better than plain benzine. He believes that alcohol interferes with the healing of wounds, owing to its affinity for water. He used to fill up the wound with plain benzine and now uses benzol, which is a refined preparation. The addition of 1 per cent of iodine increases its efficiency.

Dr. W. G. Bogart, while never using irrigation, thinks he has used too much dusting powder. He closed his remarks by complimenting Dr. Eve on his most able paper.

Dr. Reisman after complimenting Dr. Eve on the selection of his subject, which is a most practical one and of interest to all present, emphasized the importance of helping nature instead of retarding her by the use of chemicals.

Dr. Fancher thinks irrigation is losing out all around, even in G. U. work. He doubts whether we know the strength of the iodine we are using. In treatment of burns he has used everything and written several papers on their treatment and yet today does not know which is the best way to treat burns.

Dr. Woolford thinks it not so much the question of what we put on as what we do not put on. Thinks they are sometimes infected during the dressing if they have not been during the accident. Thinks the greatest

thing in the treatment of wounds is technic of surgeons and nurses. Puts on very little and thinks soap and water cannot be excelled for cleansing dirty wounds. Uses alcohol, benzine and iodine on cuts or incised wounds.

Dr. E. T. Newell came in the profession during the antiseptic era. At that time every wound was treated with a 5 per cent solution of carbolic, 1-2000 bicloride solution, etc. Then came the aseptic era when everything was scrubbed and no antiseptic was used. He thoroughly believes in alcohol and iodine without scrubbing. Never puts water on burns, but uses sterile oil and then uses calamine linament, which is very soothing and cooling. Later keeps wound saturated with sterile olive oil. If the wound cannot be dressed often uses sterile vaseline.

Dr. G. V. Williams spoke on the comparative value of antiseptics and the experiments conducted three years ago in the Rush Medical College, anything containing as much as 33 per cent solution of alcohol was shown to kill germs in one minute. 1-500 nitrate of silver, 1 per cent solution of iodine, 1 per cent solution of cresol and tincture of green soap (owing to its 33 per cent alcohol) would also kill germs in one minute. The test also showed that bicloride of mercury, while the most generally used, was like a lot of the high priced and much advertised antiseptics, such as lysol, argyrol and chinizol and McClin-tock's Germicidal Discs would not kill germs in several hours. These tests covered 2,000 cultures. Solutions used in the treatment of wounds should be divided into irritants and non-irritants to cells of the human body. While 50 per cent of argyrol failed to kill even the gonococci in several hours exposure, yet it gives as good results clinically in the treatment of gonorrhea, probably owing to its being non-irritating to the tissue. In the treatment of chancroids along with other surgical, cleanliness especially where ointments are used he uses gasoline as an antiseptic and to remove the grease of the previous ointment used. The gasoline must be allowed to evaporate or it burns the healthy skin.

Dr. Abernathy called attention to his having sat at the feet of Dr. Eve's father and grandfather and now at the feet of the distinguished son.

Dr. E. B. Anderson favors benzine and iodine. An objection to alcohol is its being expensive. He will have to be shown further before he discontinues the use of bicloride.

Dr. Watson has not given up the use of bicloride. He approves treating burns with vaseline or bland ointments.

Dr. Eve in closing remarked that he believes iodine is here to stay and perhaps turpentine. He usually cleans all wounds with benzine and iodine and prompt healing ensues. They heal as promptly as with the surgeon's knife. Electric burns are the hardest to heal, often requiring months. Perhaps the open air treatment is the best, the screening of patients, with absolute rest and let oxygen do the work. He prefers benzine to water for cleansing dirty wounds. He has never had a case of tetanus in railroad work in ten years. He, like Dr. Williams, uses 5 per cent carbolic acid gauze dry to absorb all secretion in bone surgery.

There being no further business, the academy adjourned.

The 761st regular meeting of Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order by President H. P. Larimore at 8 p. m., July 4, with the following members present: Drs. T. E. and Y. L. Abernathy, E. B. Anderson, Albert Broyles, Gentry, Ghee, Green, Stem, E. T. Newell, Sullivan, Faneher, Larimore, Richardson, Meacham, Williamson, Yarnell, J. M. Broyles, F. T. Smith, G. Victor Williams and Haskins.

Visitors were Drs. Wills, Renner and Haskins.

Report of ease by Dr. T. E. Abernathy discussed by Drs. Sullivan, Ghee and Green.

Dr. J. J. Ghee read an interesting paper on "Face Presentation," with report of ease, and Dr. Albert Broyles read an interesting essay on "Rheumatism, a Diagnostic Pitfall."

These two papers brought out a very interesting discussion by Drs. T. E. and Y. L. Abernathy, E. B. Anderson, J. C. Broyles, Haskins, Stem, Sullivan, Renner, G. Victor Williams and E. T. Newell.

Discussion closed by Drs. Ghee and Broyles.

The 762th regular meeting of the Chatta-

nooga Academy of Medicine and Hamilton County Medical Society met in regular hall July 11, 1913, President Larimore presiding with the following members present: Drs. Y. L. Abernathy, Meacham, Larimore, Yarnell, Ghee, J. M. Broyles, Godsmark, Cheney, Wallace, Fowler, Cobleigh, Steele, Selden, Frank Trester Smith, E. B. Anderson, Peay, Sullivan, Wert, McQuillan, Faneher, Travis, Brooks, J. W. Johnson, Wagner, Haskins, Barrett, Clements, Wise, Berlin, Dunbar Newell, Hogshead, Holman and G. Victor Williams.

Visitors were Drs. Renner, Dickey, Randall and Roberts.

The minutes of the two previous meetings were read and approved.

Dr. Ghee made a report of an interesting case of paranoia.

Dr. Raymond Wallace reported an interesting case of thrombo phlebitis of three years' duration following typhoid fever and which was removed. A beautiful specimen of the thrombotic veins were exhibited.

Dr. Seldon and Dr. Haskins reported a case of heat apoplexy, which proved fatal in a young man of athletic physique, twenty years of age.

Dr. E. B. Anderson reported a series of pus tubes cased with drainage and without, and in which he believed closure of abdominal cavity without drainage gave equally good results.

Dr. E. B. Wise reported an interesting case of carbuncles, which equalled the ease of Job, which is so graphically described in biblical literature.

The above case reports having brought out a very interesting discussion. The essays of the evening were read.

Dr. S. H. Barrett read and intensely interesting paper on "Prophylaxis," and Dr. J. B. Haskins read a splendid paper on "Gallstones."

These two essays brought a good discussion which was conducted by Drs. Cobleigh, Ghee, Berlin, Y. L. Abernathy, Brooks, Larimore, Wallace and G. Victor Williams.

The discussion was closed by the essayists.

There being no further business the society adjourned.

G. VICTOR WILLIAMS, Secretary.

DAVIDSON COUNTY.

June 24.—The regular meeting of the Academy was called to order at 8:40 p. m., with the President, Dr. Olin West, in the chair. Those present were: Burch, J. A. Witherspoon, D. J. Roberts, Jones, Hatcher, J. Witherspoon, D. Eve, Jr., Leonard, Ward, L. Caldwell, Mitchell, Melvain, Handly, Pollard, Floyd, Overton, L. Edwards, Nichol, Cayce, Pickens, Shoulders, C. F. Anderson, Billington, Hollabaugh, and visitors. Dr. J. A. Witherspoon moved that the reading of the minutes of the previous meeting be dispensed with. This carried. Dr. J. A. Witherspoon moved (seconded by Dr. Burch) that a committee of three be appointed to look for a new meeting place for the Academy. Passed.

The essay of the evening was by Dr. G. B. Hatcher on "Paranoia." In the absence of Dr. J. W. Stevens, who was to open the discussion, the paper was declared open for general discussion.

Dr. Gallagher moved that the privilege of the floor be extended to Dr. Kennon, late of Roanoke, Va., but now of Nashville. This was seconded by Dr. J. A. Witherspoon and carried.

Dr. Deering J. Roberts opened the discussion on Dr. Hatcher's paper, saying that not enough attention is paid to insanity in our schools and hence very few practitioners know anything about it. He spoke of some of the characteristics of paranoia, its frequency after epilepsy, the fixed delusions of a paranoiac and their combativeness. Dr. Roberts stated that a paranoic sometimes commits suicide, but usually attacks others; he stated further that a paranoic may be entirely rational on every subject except that of his delusion. He quoted several well known cases to illustrate this point.

Dr. J. A. Witherspoon heartily indorsed Dr. Robert's statements and congratulated Dr. Hatcher on his paper. He spoke of the difficulty of diagnosis, of the fixed character of the delusions of a paranoiac and how rational they are in other respects. He depreated the fact that judges and juries are given to determine the sanity or insanity of a case and state that this should be left to a specialist to determine, especially the borderline cases.

Dr. R. L. Jones was called for and stated that he knew little of this subject, but through a casual observation of the insane he knew just enough to leave this branch of medicine to the specialist. In regard to the legal side of the insane he stated that in this State it is that they are often released only to perpetrate another crime.

Dr. D. J. Roberts related a case to illustrate the sudden explosiveness to which a paranoic may be given.

Dr. Hatcher in closing said that he believed with Dr. Roberts, "once a paranoiac, always a paranoiac," and suggested that suitable laws should be enacted whereby institutions could confine their cases and not be forced to give them up, as now, through habeas corpus proceedings.

Under the head of case reports, Dr. L. E. Burch related an experiment; instead of using sterile vaseline or olive oil to cover over raw surfaces in the pelvis to prevent adhesions, in one case he clipped off a piece of omentum and in another case he used a part of the parietal peritoneum, and stitched these structures over the raw surfaces in the pelvis. The patients made uneventful recoveries. At his request, Prof. Hamilton made identical experiments on dogs and reported that the experiment was satisfactory.

Dr. D. J. Roberts spoke of the use of the amnion and funis for the grafting of epithelial surfaces and suggested that these structures could possibly be used in cases similar to Dr. Burch's.

Dr. Gallagher stated that the work of Dr. Burch was unique in so far as he knew and suggested that Dr. Burch continue his experimentation and publish his results.

At this point the chair announced Dr. Lucian Caldwell, Dr. D. R. Pickens and Dr. T. G. Pollard as the committee authorized in Dr. Witherspoon's motion.

Dr. Kennon reported a case of mastoiditis following measles which was operated upon and which did well for ten days following operation when the temperature rose to 100 F. accompanied by headache in opposite side of head and paralysis of the sixth nerve on the same side as operation. The wound was reopened, and the only thing found was a small piece of necrosed bone. He stated he

thought of, first, neuritis, but this was excluded by the appearance of the nerve at operation; second, meningitis, though this was excluded by lumbar puncture; third, brain abscess, but the patient recovered and this was excluded; fourth, this was probably a serious meningitis, but he never came to any definite conclusions and asked for suggestions as to the cause of these phenomena.

There was no discussion of this case and no further new cases reported, so the Academy adjourned at 9:40 p. m.

July 1.—The Academy was called to order by President West with the following members present: McCabe, Harris, Hibbett, Jack Witherspoon, Overton, Ward, Floyd, Melvain, Overton, Sayers, Pickens, Eve, Sr., Hill, Haggard, Sanders, J. A. Witherspoon, DeWitt, Barr, Billington, Edwards, Eve, Jr., and others.

Dr. Harris reported for the committee to investigate question of funds in the hands of the Board of Directors. He stated that an attorney had advised that the board could do as it pleased with the money. The report was adopted and the committee discharged. The essayist, Dr. L. E. Burch then read his paper on "Cancer of the Breast."

Dr. Haggard in discussing the paper agreed with the essayist except on the comparison of the mortality of this operation with that of appendicitis. Dr. Haggard also stated that education of the people was necessary to curtail the cancer mortality.

Dr. J. A. Witherspoon stated that he had to persuade people with small masses in the breast to be operated upon. He spoke of the effort being made to disseminate knowledge of cancer among the laity. He also spoke of Bloodgood's views on frozen section diagnosis. The doctor reported a case with recurrent lumps in the breast at each menstrual period. For the last three months the lumps have remained. Stated he doesn't know the best advice to give a case like this. Has seen many lumps remain years without degenerating. Has also seen four cases of metastasis in spine after removal of the breast. Reported a case.

Dr. R. A. Barr spoke of Bloodgood's position on breast removal and frozen section.

The speaker doesn't think much of differential diagnosis in tumors of the breast. Spoke of the absence of pain in breast cancer.

Dr. J. A. Witherspoon quoted Bloodgood's view. He stated that Councilman said he couldn't tell positively with frozen section whether a given case was cancer or not.

Dr. Witt said there was a good deal of hot air about early diagnosis of cancer. Reported three cases showing difficulty in handling probable cancer cases.

Dr. Haggard spoke on Bloodgood's views and stated that experience with frozen section was favorable.

Dr. Barr spoke again. Dr. Burch in closing spoke of the work of the Cancer Commission. Stated that Bloodgood relied more on naked eye diagnosis than frozen section. When in doubt he removes the breast. A positive report is valuable, a negative one not so. Dr. Burch thinks that eventually this will be cared for without the aid of surgery by some means not now known.

Under the head of case reports, Dr. Haggard reported a case of resection of the ileo-cecal region for tuberculosis and exhibited specimen.

"Mr. L., aged 35, with a supposedly mild attack of appendicitis was operated on by me five years ago. There had been a number of mild recurring spells. The base of the appendix and the head of the cecum presented a thickened appearance indicative of tuberculosis. The appendix and a portion of the head of the cecum were resected. The whole ileo-cecal valve should have been removed, but the operation had been undertaken as a mild one and no statement to the patient had been made of any anticipated serious operation.

"Afterwards under rest, tuberculin, forced feeding and sunshine he improved somewhat, but never became robust. During the last several months he has had a considerable pulling and aching pain, rather constant, over the abdomen and around the umbilicus which has been getting worse. There had been a number of colicky, cramp-like attacks, associated with nausea, vomiting of hot water, followed by relief. There was a little tenderness after these spells for a day or two. After each meal he had cramping pains like

wind colic, but without flatus. The cramping would sometimes be so severe as to double him into a knot, but would pass off after vomiting or short rest. In the two weeks preceding the operation most of his meals, if solid, were attended with this cramping, nausea and vomiting.

Upon examination a palpable mass was apparent in the right ileo-cecal region. The lungs were normal and aside from the pain and the tumor he had lost nine pounds in six weeks.

"Having seen the disease five years before it was conclusive that the tubercular deposit had increased and given him chronic intestinal obstruction. Accordingly the ileo-cecal valve and the entire ascending colon were removed. Resection was made several inches away from the ileo-cecal valve through the ileum and at the juncture of the hepatic and transverse colon above. The mesentery was divided in sections and ligated. Both ends of the diseased segment were double clamped. The mass was removed, both free ends closed and a lateral anastomosis with linen suture of the ileum to the transverse colon was effected. He made a good recovery.

"The specimen showed a greatly thickened condition of the ascending colon which had so contracted that it scarcely admitted a lead pencil; the strictured area being several inches in extent.

"This is the most frequent site for tuberculosis in the intestinal canal. It is so frequent that it has been given the name of 'ileo-cecal disease.' It is the most amenable to cure. I have had three other resections for this disease, one of whom is alive and well at the end of four and one-half years."

The Academy then adjourned; 9:45 p. m.

July 8th.—The regular weeking meeting of the Academy was called to order at 8:10 p. m. by Vice President Dr. Duncan Eve, Jr., with the following present: D. J. Roberts, Toy, Savage, Bloomstein, J. Witherspoon, Gaines, Hill, Duncan Eve, Sr., Davis, Hailey, Floyd, H. Barr, Simmons, L. Smith, Billington, Witt, Owsley, O. Bryan, R. Caldwell, Owsley, Shoulders, Sharp, Edwards, Glasgow, Altman, Keller, McCabe, Dixon, Jones, Morrissey, Overton, Ward, Hargis, H. Tucker, Hatcher,

Burch, Mitchell, Tigert, Glenn, C. F. Anderson, Grizzard, L. Caldwell, Fort, Haggard, Harrington, Hibbett, and visitors.

In the absence of the essayist, Dr. Duncan Eve, Sr., reported a case seen through the courtesy of Drs. Owsley and Grizzard of a double fracture of femur in a well developed bottle-fed infant of eight months. One femur was fractured at the junction of the upper and middle third and the other at the middle third; both fractures being complete and transverse. Dr. Eve stated that this case was the first he had seen in an experience of forty years in a child, to say nothing of an infant. In regard to the treatment of this case, Dr. Eve stated that he thought of Bryant's apparatus, but having heard an interesting paper before the Section of Surgery of the A. M. A. on a modified Bryant's, he decided to use the latter. The limbs were flexed, the legs on thighs and the thighs to a right angle to the body. A splint was made of shoe leather for the thigh and then a right-angle splint was placed under thighs and legs. These were retained by adhesive and bandages. A broomstick was then placed under both popliteal spaces and the limbs suspended from a support at the foot of the bed. The amount of traction was measured by a spring scale. Sufficient traction was exerted to just elevate the buttocks from the bed.

Dr. Owsley stated that the interesting features were the breaking of both femurs and the age of the patient. He stated the fracture occurred by the baby throwing himself backward from the shoulders of the person who was holding him. The latter clutched the baby's limbs more tightly to prevent him from falling, and the femurs broke.

The essayist, Dr. Jack Witherspoon, having arrived, he read his paper on "Nephritis in the Light of Recent Investigation." Dr. A. W. Harris was to open the discussion, but was absent. Dr. R. L. Jones was called for, and he stated that recent investigation had revolutionized the whole picture of nephritis as taught in past years. In regard to Fisher's theory, the latter has shown that some of the so-called symptoms of nephritis are not symptoms, but concurrent pathologic conditions. Dr. Jones stated that much is yet to be learned on this subject.

Dr. Witt stated that Dr. Witherspoon's paper was timely, in that it presented the disease as known and described by Bright and in the present light of recent knowledge. Dr. Witt stated that practically no knowledge had been gained in this disease since the time of Bright. He believes that the stress placed on focal infections is the only advance, though many cases of so-called focal infections have not been proven. Dr. Witt stated that he is not prepared to believe that focal infections give rise to kidney lesions in all cases. The finding of albumen and tube casts does not mean Bright's disease. He has reported to the Academy two cases diagnosed as Bright's disease, but when seen by him there was no albumen, and they certainly did not have Bright's. He believes that the phthalein test of value in determining the renal efficiency. He has used it in about six cases and has found it of value.

Dr. Hill reported having used the phthalein test in two cases with definite results. In regard to Fisher's theory, Dr. Hill believes that Fisher goes after effect rather than result. Fisher states that edema is due to acidosis, but what causes acidosis?

Dr. Glenn said he didn't know the cause of Bright's disease, but believes that alcohol is the cause of interstitial nephritis. He reported cases illustrative of his point. The treatment is the main question, however. Dr. Glenn does not believe that the elimination of salt from the diet does any good; on the other hand, he believes salt does good. In the treatment of interstitial nephritis he uses minute doses (1-40 to 1-50 gr.) of bichloride of mercury and iron, plenty of water and regular (?) diet. He believes the prognosis in interstitial nephritis is good. Dr. Glenn then reported cases said to have been cured by him.

Dr. L. Caldwell corroborated the statements of Dr. Glenn in regard to one case.

Dr. Witt said that in regard to the cases referred to by Drs. Glenn and Caldwell, he doesn't think the diagnosis justifiable. The heart and blood vessels should be considered. Many cases of chronic interstitial nephritis live for years and feel well.

In closing the discussion on his paper Dr.

Witherspoon thanked the Academy for the liberal discussion.

Dr. Haggard reported a case and exhibited specimen of a partial gastrectomy for cancer, three-fourths of the stomach having been removed.

"A colored man, aged 34 years, entered Vanderbilt Hospital July 1, 1913, with a tumor, which had been present since January, that was palpable in the left hypochondriac region, with a history of "indigestion" for eleven months. This consisted of pain about one-half hour after eating. In March he began vomiting after eating, when he had nausea, and this relieved his pain. He became quite weak, however, and he took his bed in March, which he had kept off and on since. The nausea, pain and vomiting have continued with a large quantity of gas; constipation and recently the vomiting has been like coffee grounds. He also had tarry stools (melena); he had lost fifty pounds since Christmas. There were no supra-clavicular glands, but a slight systolic murmur at the apex.

"His red cells were reduced to 2,592,000 and the hemoglobin to 35 per cent. A stomach examination showed a total acidity of 45, the presence of lactic acid and the Oppler-Boas bacillus and a slight presence of free HCl. The combination of painful digestion, vomiting blood, tumor and loss of weight, together with the stomach analysis left no doubt as to the diagnosis. It should have been made even before the advent of the tumor, which was over six months ago. The Wasserman reaction was x.

"The operation, though late, offered the only chance for cure, though extremely small. It should have been done a number of months before when a good prospect for permanent cure would have been possible.

"At the operation the lesser omentum was quite full of glands, but they could all be removed by going high on the lesser curvature. The gastric and pyloric arteries were ligated. The left gastro and epiploic artery and vein were ligated at a point far out on the greater curvature near the fundus. The gastroduodenal artery was ligated behind the pylorus. With a great deal of difficulty the large tumor, larger than his fist, together with

most of the stomach, was extirpated. The duodenal end was closed with a purse string suture and buried. The cut end of the fundus of the stomach was closed over securely and the jejunum brought up and attached to a new opening at the bottom of the small pouch which was to represent the future stomach. The operation was extremely tedious and difficult, but the patient has survived and doing fairly well now in the beginning of the fifth day.

"The specimen shows an enormous growth, forming almost an hour glass in the pyloric antrum and causing almost complete obstruction.

"If persons with painful digestion in middle life could be looked upon as possible victims of cancer, until this could be disproved, and if not, early exploration of the stomach through a small incision could be made it would give a greater chance for these otherwise hopeless patients to be relieved by removal of the cancerous stomach, just as one removes a cancerous breast."

Dr. Gaines discussed Dr. Haggard's case with especial reference to the diagnosis and operability of gastric cancer.

Dr. Glenn reported a case of a man of 20 years with a recent case of syphilis. The patient's urine showed a specific gravity of 1.022 and 2 per cent of albumen, but no casts. He wanted to know if it would be safe to give this patient salvarsan.

Dr. D. J. Roberts stated that in as much as Dr. Glenn had such good results with bichloride of mercury in nephritis, why not try this treatment on the present case.

Dr. Glenn reported a case of enlarged testicle of syphilitic origin cured by salvarsan. The Academy then adjourned.

July 15.—The Academy met in regular weekly meeting in the Tulane Assembly Rooms at 8:05 p. m. with the President, Dr. Oliver West, in the chair. Among those present were: Hill, Shoulders, Cowden, Cayce, Walsh, Sullivan, L. Caldwell, Dixon, Pollard, Pickens, Edwards, Nichol, Burch, D. Eve, Jr., Melvain, C. F. Anderson, Oliver, Jack Witherspoon, Weaver, Billington, Ward, Floyd, Overton, Goodwin, Sanders, Tigert and Hibbett.

In the absence of the essayist, Dr. Paul De Witt, who was unavoidably detained on account of sickness, case reports were declared in order.

Dr. Cowden raised the point of selecting a new meeting place for the Academy during the summer months. The chair stated that a committee had already been appointed to look for a new meeting place, and asked Dr. Lucian Caldwell, the chairman of said committee, if he was ready to report. Dr. Caldwell stated what the committee had done, but said that nothing definite had been decided upon and requested further time.

Dr. L. E. Burch then reported a series of brain cases operated upon recently. The first was a case of traumatic epilepsy with religious delusions. A piece of the skull, together with the dura $4 \times 1\frac{1}{2}$ inches, was removed. The second was a partial removal of the Gasserian ganglion for trifacial neuralgia. Injections of alcohol and osmic acid had failed and large doses of morphine gave no relief. The operation was prolonged and difficult, but the patient reacted and was at present free from pain, although her mental state was somewhat confused, probably on account of the prolonged suffering and a rapid withdrawal of the morphine. The third case was a decompression done for fracture at the base of the brain.

Dr. Duncan Eve, Jr., who was associated with Dr. Burch in the case, said that the amount of bone removed by Dr. Burch in the first case was the largest he had ever seen. He also said that the bone was the hardest.

Dr. Overton, who was also associated with Dr. Burch, spoke of the difficulty experienced in reuniting the temporal fascia after severing it in operations upon the cranium.

Dr. McCabe, in speaking to the point of fractures at the base, said that 33 1-3 per cent get well if nothing is done. In his experience he has seen only four recover. He stated temporal decompression is not practiced in the severest cases and the other 1-3 get well if left alone.

Dr. Tigert spoke to the point of head injuries and said that he believes that one is justifiable in exploring a scalp where a fracture is suspected. He reported a case to emphasize his point.

Dr. McCabe spoke in support of Dr. Tigert's point and said that this is practised almost as routine at the City Hospital.

Dr. Billington reported a negro woman of 40 who complained of paroxysmal pain in epigastrium which radiated to both sides. The pain was worse at night and required opiates to give relief. The physical examination was negative except heart. A systolic murmur was heard at the apex which was transmitted to the median line. Patella reflex was absent. There was a positive Wasserman of four plus. The patient died suddenly. At autopsy there was a quart of fluid in the right pleural cavity. A ruptured aneurysmal sac was found at the fifth dorsal vertebra of the descending aorta. There was a slight dilatation of the ascending aorta, but the arch was normal as was the heart.

Dr. Weaver reported a negro woman of 70 who complained of "rhumatism" in left lumbar region. On examination a fixed mass, non-pulsating, was found in that region which proved to be an aneurysm of the abdominal aorta. The Academy then adjourned.

July 22, 1913.—The regular meeting of the Academy was called to order at 8:15 p. m. by the Vice-President, Dr. Duncan Eve, Jr., with the following present: D. J. Roberts, Price, Litterer, Sanders, Gaines, McCabe, Witt, R. Caldwell, Cayce, J. Witherspoon, Williamson, Hibbett, Pickens, Edwards, Pollard, Dixon, Sayers, Ezell, Melvain, Sharp, Cowden, Billington, L. Caldwell, R. A. Barr, O. N. Bryan, Jones, Hill, Shoulders, Ward, Harrington, Leonard, Overton, and visitors.

The essay of the evening was "Asepsis and Infection," by Dr. W. A. Bryan.

Dr. Litterer, in opening the discussion stated that he did not agree with the essayist that no surgical operation has been done without infection. It takes, he said, more than one bacillus to infect. One virulent streptococcus may infect, but this occurs only experimentally. Pathogenic bacteria are rare in the air, but Dr. Litterer believes that one great source of infection in operations is from the mouth of the operator.

Dr. Witt moved that the privileges of the floor be extended to Dr. Reagor, of Shelby-

ville, and Dr. Richards, of Sparta, visitors to the Academy. Carried.

Dr. Gaines emphasized the point brought out by the essayist in regard to the care that should be used in handling tissues. He stated that this should apply to the handling of the viscera, which caused shock, the latter lowering the resistance, temporarily at least, of the patient. Dr. Gaines condemned the practice of widely exposing the structures of the abdominal wall when making an incision into the cavity.

Dr. Cowden stressed the importance of carefully handling the tissues and stated that he believed that too many sutures are often used, thereby devitalizing the tissues by constriction.

Dr. Witt commended Dr. Bryan for writing a paper on the fundamental principles of his subject and suggested that more papers of this kind should be brought before the Academy. He suggested that an evening would be well spent in considering such a subject as "calomel," or "pneumonia," or other subjects which the ordinary physician seldom reads.

Dr. Price talked at length, saying, in part, that every surgical procedure subjects the patient to possible infection and hence it behooves the surgeon to produce as little trauma as possible. He spoke further of the transition of surgical procedure, especially in reference to the handling of tissue.

Dr. Leonard asked Dr. Bryan if there is anything in the saliva or fluids of the mouth which prevented infection, stating that not one in a thousand extracted teeth is followed by infection.

Dr. Bryan in closing stated in answer to Dr. Leonard that the mouth contained many species of bacteria, and while there was infection, no inflammatory reaction occurred. He said infection was often absent in the mouth and face on account of the free blood supply.

Under the head of "Case Reports," Dr. W. A. Bryan reported having seen with Dr. Hollabaugh a young lady 20 years old, previously well except diseases of childhood. On Friday at noon she ate heartily. This was followed by pain in abdomen and nausea. Half ounce of mustard was taken and later repeated, but

did not vomit. Ipecac was then taken, and later repeated, still she didn't vomit. Castor oil was then taken, but this did not act. On the following day her temperature was 100 F., with some distention in the epigastrium. On the second day her pulse was 120 and the abdomen irregularly distended, presenting a picture of a markedly distended stomach. A stomach tube was introduced and five or six quarts of fluid was drawn off. Patient is now perfectly well. Dr. Bryan considered this case peculiar in that it was a case of acute dilatation of the stomach in a patient not operated upon and not previously ill.

Dr. Roberts spoke of the peculiarities of the action of mustard and ipecac, especially as emetics. The Academy then adjourned.

J. F. GALLAGHER, Secretary.

WEAKLEY COUNTY.

The Weakley County Medical Society met in the Board Room of the People's Bank at Martin, July 14, 1913, with the following members present: Drs. Heath, Gourley, Goldsby, Sawyers, Fields, J. E. Taylor, L. E. Taylor, B. A. Bondurant, McKay, Bays Little, R. M. Little, Edmonson, Stewart, Sebastian and Wingo.

The meeting was called to order by the President, Dr. Sawyers, and the minutes of the last meeting read and approved.

The financial report was then read as follows:

Balance on hand at June meeting-----	\$8 00
Amount received during the month----	6 00
Amount paid out—	
Baptist Builder -----	2 75
Dr. Wingo -----	1 65
Total -----	\$4 40
Balance on hand -----	3 60

To accommodate those that had to leave on the evening train, the regular order of the program was reversed so that Dr. Bondurant, of Cairo, could read his paper first. He read a magnificent paper on "Does not Scientific Medicine Call for a Change in Specialism?" The paper was enjoyed and commented upon by all present. Dr. Gourley moved that the paper be sent to the Committee on Publication of the State Journal with a request that this paper be published in the Journal. Dr.

R. M. Little seconded the motion and it carried. Dr. Bondurant then reported two very interesting cases, the first case of tuberculosis, the second case of meningitis with specimens of the spinal fluid and bacteriological findings for the four or five days. The society discussed these cases and many questions were asked.

Dr. Edmonson then read a very fine paper presenting a case of gangrene of the lungs which he thought was caused by the same bacteria as that causing the throat troubles so prevalent in this section recently and in which Dr. Balys Little made the bacteriological finding. This paper was discussed by all present, and many questions asked Drs. Little, Edmonson and Gourley.

Dr. Goldsby, of Gleason, was asked to present his case in which he was sued for malpractice to the society for their future benefit, and to enable us, if possible, to help him in this matter.

The Program Committee reported as follows: Papers by Drs. Gourley and Biggs. Discussion on Dr. Gourley's paper, Drs. J. E. Shannon and R. M. Little. On Dr. Biggs' paper, Drs. J. E. Taylor and J. C. Young.

There being no further business the society adjourned to meet the second Tuesday in August.

T. B. WINGO, Secretary.

GREEN COUNTY.

The Green County Medical Society met in regular session July 7, in the office of Dr. W. H. Hawkins, Dr. M. A. Blanton presiding. The minutes of the previous meeting were read and approved. The following members were present: Drs. Simpson, Hughes, Brumley, Woolsey, Wilhoit, Morre, Bright, H. M. Taylor, Bell, Huffaker, Blanton, Hawkins and Love. Visitor, Dr. Mathes.

The program was taken up, Dr. M. A. Blanton being the only essayist present read an excellent paper on "Predestination," which was discussed by Drs. Huffaker, Bell and Simpson and closed by essayist. Dr. Blanton also favored us with a clinic (a case of bursitis or house maid knee). Dr. Hawkins favored us with a clinic (a case of paralysis of the eyes (?). The unfortunate

was an applicant for exemption from road working.

Several interesting cases were reported by Drs. Hawkins, Woolsey and others.

The question of medical defense was taken up and discussed, but was tabled until the next meeting (first Monday in October). The society adjourned to meet in the office of Dr. H. M. Taylor on the first Monday in October. After adjournment the society indulged in an ice course and smoker.

J. T. LOVE, Secretary.

Book Reviews

THE PSYCHONEUROSES AND THEIR TREATMENT BY PSYCHOTHERAPY, by Prof. J. Dejerine, Professor of the Clinic for Nervous Diseases of the Faculty of Medicine of the University of Paris, and Dr. E. Gauckler, Ancien Interne of the Hospitals of Paris; authorized translation by Smith Ely Jelliffe, M.D., Ph.D., Adjunct of Diseases of the Mind and Nervous System, Post-Graduate Medical School and Hospital; Visiting Neurologist, City Hospital, New York. Price, \$4. J. B. Lippincott & Co., Philadelphia.

There can be no question that the subject of Psychotherapy is destined to become a recognized department of medicine, and provision for its teaching to medical classes will be more generally provided for.

The various psychoneuroses are gradually being systematically classified and the modern physician is serious in his effort to understand and intelligently comprehend these questions. The several books which have come to the reviewer's attention during the past year have seemed to lose regard for well known aberration of function due to established pathologic changes, and have been prone to attribute "everything" to psychic influence. The above work by Professor Dejerine avoids this criticism and appears to be best suited for the average reader. The necessary amount of faith in one's own ability to correctly interpret a Freudian analysis will, in our opinion, remain exclusively the property of highly developed specialists, but the average doctor will be able to gain much practical knowledge from a careful reading of the above work, which we most heartily commend.

HOW TO TAKE CARE OF THE BABY. A Mother's Guide and Manual for Nurses, by Francis Tweddell, M.D., Alumnus Bellevue Hospital, New York; Fellow of the New York Academy of Medicine; Assistant Physician to the Babies'

Hospital Dispensary, New York. Second Edition, revised and enlarged. The Bobbs-Merrill Co., Publishers.

This little book in every way fulfills the author's purpose of presenting in a clear and concise manner directions relating to the care of infants, especially as regards nursing and artificial feeding. The chapters are especially well selected and complete.

It should be in the hands of every mother who has a little "fairy in her home."

THE NARCOTIC DRUG DISEASES AND ALLIED AILMENTS: Pathology, Pathogenesis, and Treatment, by Geo. E. Pettey, M.D., Memphis, Tenn., member Memphis and Shelby County Medical Society, Tennessee State Medical Association, American Medical Association, Tri-State Medical Association of Mississippi, Arkansas and Tennessee; also Mississippi Valley Medical Association, Southern Medical Association, and of the American Society for the Study of Alcohol and Narcotic Diseases. Illustrated. F. A. Davis Company, Publishers, Philadelphia.

Dr. Pettey has written a worthy book which he has dedicated "To the Man who is Helpless and yet Hopes, who longs for Freedom, who Strives against Odds Unequal, while No One Seems to See, or Care to Help, This Book is Offered as a Ground for Hope, a Rift in the Clouds, a Helping Hand." To the intelligent physician who reads this work will be found that he offers hope and freedom to those unfortunates in whose interest the book was written. Dr. Pettey has considered the matter from a humanitarian standpoint, and has not neglected in any sense the essentials relating to collateral subjects. The book is complete in every detail and should be in the hands of everyone interested in narcotic drug diseases and allied ailments.

TUBERCULIN IN DIAGNOSIS AND TREATMENT. By Francis Marion Pottenger, A.H., M.D., LL.D. Medical Director of the Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. 243 pages, royal octavo, 35 illustrations, including one colored plate. C. V. Mosby Co., St. Louis, Mo. Price, \$3.00.

This volume is the most complete and up-to-date work on tuberculin that has yet appeared. Beginning with the importance of tuberculin tests in the early diagnosis of tuberculosis, the author discusses the detail "Subcutaneous Tuberculin Test," "Cutaneous Tuberculin Test," "Tuberculin in Treatment of Tuberculosis," "Hypersensitiveness," "Certain Conditions which Have Made the Adoption of Tuberculin as a Diagnostic and Therapeutic Measure Difficult," "Evidences of the Therapeutic Value of Tuberculin," "Fever in the Relationship to Tuberculosis," "Temperature Curve in Tuberculosis," "Technic of Administering Tuberculin," and an Appendix, in which is given for the first time in English, Koch's announcement of the discovery of tuberculin.

Dr. Pottenger is qualified to speak on this

subject. Two thousand cases of tuberculosis coming under his personal care in sanatorium practice furnishes the basis for this work. Careful, painstaking effort, is everywhere noticeable in this production. The chapters on Importance of the Tuberculin Test in the Early Diagnosis of Tuberculosis is especially to be commended, as well as that on Technique of Administering Tuberculin.

There is no doubt but that many failures attending the use of tuberculin in the past have been due to a lack of knowledge of its proper administering. This defect can be overcome by a careful perusal of this volume and to follow its technique.

MISCELLANEOUS.

In compliance with an order of the post-office department passed August 24, 1912, we publish below data required in sections 467 1-2, 2, 3, 4 and 5.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.

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Note.—This statement is to be made in duplicate, both copies to be delivered to the postmaster, who will send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office.

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Sworn to and subscribed before me this 3rd day of July, 1913.

CHAS. B. H. LOVENTHAL,
Notary Public.

(My commission expires October 5, 1914.)

(Seal)

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NUMBER 5

TREATMENT OF ACUTE INTESTINAL OBSTRUCTION.*

By W. A. Bryan, M.D.,

Professor of Surgery, Vanderbilt University,
Nashville, Tenn.

The mortality of acute intestinal obstruction is one hundred per cent, unless the obstruction, a mechanical condition, is mechanically relieved. The mortality of intestinal obstruction when operated upon by the most skillful surgeons is probably more than fifty per cent, and a very few of these deaths can be attributed to anesthesia or surgery, but to the conditions existing at the time of operation.

When one considers the usual simplicity of the condition and the uniformity of the symptoms, no matter where the obstruction may be, from pylorus to anus, no matter what its cause, one would be reasonably justified in hoping that relief should be attainable in practically all cases and that the mortality should be low, inasmuch as the operation required is uniformly one of three procedures, namely, the removal or release of the obstructing cause, intestinal anastomosis, or the establishment of an artificial outlet or enterostomy. None of these procedures embraces elements which entail a high mortality, for the severance of a band, the untangling of a torsion, the radical cure of hernia, the anastomosis of two segments of the alimentary tract and the establishment of an artificial

opening are all operations which should and do carry with them essentially a very small death rate; yet it remains an exceedingly embarrassing fact that the mortality of intestinal obstruction is far higher than the combined percentages of all the above named procedures.

Before the meaning of the situation can be discussed, it is necessary to consider what happens when obstruction occurs. This is true when the obstruction is altogether acute, and when a chronic obstruction becomes acute, that is, complete. When the gut is obstructed at any point, the first effort is for the proximal or cephalad portion to undertake the release of the obstruction by attempting to force its contents through the obstruction by constantly increasing peristaltic efforts. Failing in this effort, the constantly accumulating gases, liquids and solids produce an enormous distension of the gut, and it takes the only alternative left, namely, that of emptying its contents by reverse peristalsis, and nausea and vomiting come to the rescue, throwing off naturally stomach contents first, later and continuously the stercoraceous contents of the intestine. Empty the intestine must; if it cannot empty normally downward, it will abnormally in the reverse direction. So the very first thing that acute obstruction does, no matter where located or of what nature, is to call into activity all the ordinary and extraordinary efforts at peristalsis that the gut can command. This will be referred to later in the paragraph dealing directly with treatment. Secondly, the gut loses its power to carry on its load of excrement, toxin-laden, toward the normal outlet

*Read before Tennessee State Medical Association, April, 1913.

and is compelled to suffer it to remain at a disadvantageous point, a fine culture medium for the limitless numbers of bacteria whose poisons with those of the contents themselves are absorbed, and sooner or later surely establish a toxic condition, a genuine auto-intoxication whose harmfulness is manifested in these cases in a gradually increasing form, producing rapid feeble pulse, subnormal temperature, anxious, pallid expression, and death, for it is usually this that causes death. Besides this, the failure to retain and absorb water in any quantity reduces the powers of elimination to a minimum. The peristaltic efforts continue fruitlessly until the gut is paralyzed, distension becomes more marked, the gut grows darker and begins to yield to infection, the peritoneal covering becomes edematous and is easily broken and strips away upon the slightest manipulation; and the patient becomes hopeless, no matter what course is pursued; he is already moribund.

From what has been said, it is very evident that of all the things the patient needs, he needs stimulation of peristalsis least of all; it will and can only hasten an early death. But it is what he usually gets, what he has already presumed to administer to himself before he calls in medical advisors, and what he sometimes gets in still more heroic doses when they come. It may be very necessary that the bowels be emptied, but the last plan on earth than can be efficient in cases of obstruction is purgation, and it is only too apparently true if we would consider the facts before us; who would think of administering a purge to a man who had an unmistakable strangulated hernia? On the other hand, how many apply this remedy most vigorously and persistently to similar conditions, when the obstruction, no less immovable, is hidden from view beneath the walls of the abdomen. Purgation cannot relieve obstruction, but it does increase peristalsis, it does increase vomiting, it does hasten the exhaustion of the muscularis of the gut, it does limit the time in which the only relief must come if it is to be efficient. If the bowels must be moved, enemata may be given and repeated, but purgatives never.

I have already suggested that the lesion under discussion, being mechanical, must be

relieved mechanically. The plans of relief, too, have been suggested, namely, release of the obstruction, anastomosis with or without resection, and enterostomy. To any one who is acquainted with the practical technical details of intestinal surgery and with the circumstances under which operations for obstruction must be done, it is apparent how difficult the first two procedures are, and they are the preference; and to any one acquainted with the results of the last-named procedure it is likewise apparent how discouraging this last resort is to him who is compelled to employ it as a final chance, either because of the pathological changes that have developed or the dangerous state of the patient. But it is not so much my purpose to choose among the possible plans of relief as to discuss measures which necessitate the more instead of the less objectionable of them, and which lead to a high mortality. While the profession was learning the treatment of appendicitis, tens of thousands of lives were sacrificed to the god of ignorance. We did not know whether to operate, and, having decided upon an operative course, we did not know when to operate. Before our various organizations scientific men were furiously arraying themselves against each other, surgeons against physicians, claiming and substantiating their claims with various statistics that their respective grounds were more tenable. So the fight went on for life, treating medically until the last hope was reached and that "last hope" was called in in the form of a surgeon, who frequently arrived in time to hear the patient murmur with his prophetic dying lips that the end was now drawing near, and only too often saw the prophecy fulfilled before the wound could be closed and the patient returned to his bed. But now layman and physician and surgeon understand that appendicitis means an operation at once, and that with a minimum of mortality. We have learned how to deal with it. But appendicitis was never as deadly unoperated as intestinal obstruction, for the latter is as deadly as cancer. The mortality from operation for appendicitis, even in the hands of inexperienced operators, was never as high as that from intestinal obstruction in the hands of the most skillful

and experienced surgeons. Pardon this last step: The percentage of mortality from appendicitis untreated absolutely would be much less than that of intestinal obstruction operated upon most skillfully. That is appalling, it is to be granted, but it is a very emphatic illustration of the facts as they stand. Let us seek an explanation. In the earlier days of appendicitis, we waited and treated, and purged and increased peristalsis with purgatives and got ruptures which we did not recognize because we had deadened all sensibility with opium; and when we recognized them, waited again until they could be walled off, and later, not very much later, attended the funeral and "wept with those that weep." We stand today in relation to our treatment of intestinal obstruction precisely where we stood twenty years ago on the treatment of appendicitis; if we really know anything about it, our results, operative and non-operative, would be the last evidence to prove it. They are disgracefully and disgustingly bad. Bad because we do not admit that medicine is an improper means for unlocking a sewer; because we do not practice, if we know, that chemical therapy will not relieve a stricture or a *genu varum*; and, what is more, because we know that the very efforts we make invariably and unavoidably render the condition we are treating worse, because we rely on this forlorn plan until the best and frequently the only chance of recovery is gone, and then apply it ruthlessly.

If there ever was a condition that should always be looked upon as surgical in every phase, I should unquestionably place intestinal obstruction at the head of the list. It must be conceded that cases get relief occasionally by accident, as I have seen several times, by various manipulative bloodless plans, but if we would know the truth this plan probably sacrifices ten where it saves one.

Let me not be understood to array the physician and the surgeon against each other. I think the latter as guilty on an average as the former. Have we not all ridden and traumatized strangulated hernias for hours at a time and then given an anesthetic and ridden them some more hours, when we could not fail to know that the tissues we were dealing

with could not withstand such trauma? And have we not done this when the owner of that hernia, who had reduced it a thousand times, had failed to be successful and had himself probably already traumatized the contents? Such a procedure is of necessity more dangerous than an open operation. The benefits we render to cases of acute obstruction will improve only when we come to admit that it is a surgical condition from and immediately after its incipency.

It is not my intention to be dogmatic, too slow to suggest operation or too swift to perform it. Nor are the cases where operation can only fail to relieve and those in which diagnosis is impossible at a reasonable time forgotten. The idea is that in admitted and in probable cases a definite plan should be followed that cannot fail to be a vast improvement over our present methods.

DISCUSSION.

DR. S. M. MILLER, Knoxville: I think Dr. Bryan is eminently correct in what he has said about acute intestinal obstruction. It is purely a mechanical condition and requires mechanical relief. The operative treatment in these cases is not any more important than the preliminary treatment, and I do not know of any disease where there is so much erroneous treatment by the patient or the patient's friends; that is, the giving of purgatives, as Dr. Bryan suggested. This is always a rule with the laity, and it makes matters worse always. When obstruction occurs anywhere in the canal, there is an arrest of the current at the constricted part, then dilatation following above as the contents of the intestinal tract are forced down, and the ascending dilatation increases so that pressure paresis quickly supervenes. As soon as the current is arrested in the intestinal tract the contents become toxic and are rapidly absorbed. The first suggestion of the laity is how to get the bowels to move, and they will go through the entire list of purgative medicines. I have not seen a case of intestinal obstruction that has lasted any time that had not taken the whole list of purgatives.

Dr. Bryan omitted mentioning in connection with the preliminary treatment the matter of gastric lavage. I think that is one of the most important points in the preliminary treatment; namely, the frequent washing out of the stomach to free it of active toxins that are going back from the duodenum into the stomach. That puts the patient in the best possible condition for operation, and one should give no medicine and no food by the stomach. With that kind of preliminary management, these cases will go to the

hands of the operator in very much better shape.

DR. L. E. BURCH, Nashville: Dr. Bryan has presented a paper that is so concise and has so thoroughly covered the subject that he has left really very little room for discussion. He has, however, brought out some very important points that I will attempt to dilate on and enlarge.

The keynote of success in cases of intestinal obstruction is an early diagnosis, and the important early symptoms of the obstruction are an acute abdominal pain associated with a sub-normal temperature. Those two symptoms alone are very, very suggestive of intestinal obstruction. We must remember that in the earlier stages we do not find the fast or rapid pulse, a distended abdomen, and a rise of temperature and the fecal vomiting. Those are not the symptoms of intestinal obstruction. Those are the symptoms of impending death. They are symptoms of toxemia, and are symptoms of peritonitis. For that reason wherever we find an acute abdominal pain associated with a sub-normal temperature, if the laboratory examination shows leucocytosis, we should be very suspicious.

Another point Dr. Bryan brought out, and a very important one, is with reference to the use of purgatives. In any intra-abdominal condition, where we suspect some gross pathology, a purgative is absolutely contraindicated. I am sure, every surgeon here has had the experience of opening the abdomen and finding it full of epsom salts or possibly oil, and perforation under these conditions is caused by the administration of purgatives.

Dr. Miller, of Knoxville, has brought out a most excellent point in regard to the preparation for operation, and that is washing out the stomach. In addition to that, a mouth wash is very important. One other point of importance is the administration hypodermically of saline solution. There have been many experiments made of late showing that death from intestinal obstruction is not due from toxemia, as we always thought, but it is due to thirst, and in experiments on the lower animals, dogs have been kept alive from 14 to 16 days by administering hypodermically saline solution. That is something that should be used as a preparatory measure for operation, and not, of course, as a curative measure.

So far as the operation is concerned, the quicker we get in and the quicker we get out, the better. This is a condition where we must work rapidly. In many cases a local anesthetic is indicated, and the less we do the better. These cases do not demand a perfect technic, some of them only an enterostomy, for the reason that they are in a state of shock. Their resistance is poor, and the less surgery we do, the more likely we are to save the life of the patient.

DR. W. H. WITT, Nashville: The question resolves itself largely into the matter of the common prescription for colic. There are four com-

mon causes for acute violent intestinal pain. These are renal colic, gallstone colic, appendicitis, and intestinal obstruction. Of course, there are others, but these are the causes we come upon every day. What do we do, a great many of us at least? To practically any case of colic we come in contact with or are telephoned to about, we give a purgative. I do not mean to make that so broad as to say that all physicians give purgatives in appendicitis. That is too strong, and yet everyone knows that there are physicians—good ones, too—who, when a patient has an attack of pain which may be due to appendicitis, give that patient a dose of salts or a dose of oil. He gives it also for renal colic. He gives a dose of salts or of oil whether he is clear on the diagnosis or not. He gives it also for gallstone colic. I do not believe he would give it for intestinal obstruction if he knew what the diagnosis was, but the trouble is we do not know with an internal colic what the diagnosis is. What grows out of this custom? What does the family almost invariably do when the child has a bellyache? The child is given a dose of oil or castoria or something else without asking for a doctor's advice.

All cases of acute intestinal colic that are at all severe should have nothing more than an enema until seen by a physician, and probably nothing more then. When we teach the people universally not to go beyond that, and not to give purgatives in any varieties of severe colic, we will not have these four and five-day cases of intestinal obstruction.

There is no question about the value of operation for intestinal obstruction. No one believes it is not a surgical condition from the start. The trouble is the family is allowed to give these things, thinking that the trouble or pain will pass away. They take these cases in their own hands, and they think they can wait under some circumstances. The family must be taught that in cases of colic they must not give purgatives, no matter what kind of colic it is.

DR. LOUIS LEROY, Memphis: It is a simple matter to say that the diagnosis should have been made at once and a certain thing should have been done, but sometimes it is not a simple matter to make the diagnosis at the bedside. The cardinal signs of low temperature and pain are very well as far as they go as indicating intestinal obstruction, but I have seen intestinal obstruction with almost no pain in the beginning—I mean acute obstruction. I have seen, as you have all seen cases with acute abdominal pain with subnormal temperature, in which there was no obstruction. For instance, I have seen very severe attacks, even localized, with subnormal temperature. I have seen cases with a simple colic, with marked subnormal temperature, the obstruction being pretty well localized. Things of that description are apt to be misleading. I

have seen referred pain from ovarian inflammation with no temperature whatever, or a subnormal temperature that has been extremely puzzling. In those cases it is our duty to go carefully, to avoid purgatives, as Dr. Witt has suggested, to use enemas, perhaps in large quantities, and to palpate the abdomen repeatedly and carefully, because with careful palpation, after the bowel has been emptied by enemas frequently, you are able to locate the trouble. In addition to that, the leucocyte examination early is sometimes misleading because generally you do not have, in my experience, leucocytosis in intestinal obstruction. It is a sudden mechanical thing, and you have not in the cases I have seen contrary to the experience of Dr. Burch, leucocytosis. That naturally comes later when there is inflammation or when toxemia is marked.

As to the intravenous saline solution, that, of course, is useful, and it has been shown by experiments that there is water starvation, but there is another factor to be considered, namely, that of elimination. You are simply washing out the blood by the intravenous saline solution in considerable quantities. You dilute the toxins by the elimination from the kidneys, and you are saving the patient just as much poisoning, and at the same time I grant you you are supplying water. The patient will not die of thirst, even though he has no water, and although he has active kidney elimination in the course of three or four days, it is a valuable thing, but water is not the only thing. There is a good deal more than the definite textbook statement to be taken into consideration. The pulse of the patient must be considered, its character and steadiness. You must consider the peristalsis, as you observe it through the abdominal wall even before the reflex peristalsis brings about fecal vomiting. We should strive not to make mistakes. We should try to make an early diagnosis, but I am free to confess that in some cases I have seen I have been very much puzzled and have not suspected for some time that I have had a case of intestinal obstruction to deal with until such time as I felt the vomiting became marked and the vomited material dark in color and pretty close to the border-line of fecal vomiting. While we should strive to make an early diagnosis of intestinal obstruction, it should be distinctly understood that we should not condemn everybody who does not make his diagnosis in so many minutes the first time he sees the patient. He may see the patient and when he has only had an attack of colic for fifteen minutes.

DR. COOPER HOLTZCLAW, Chattanooga: No child ever ate a green apple without having a bellyache, and no child ever had a mother without having a dose of castor oil or some other purgative administered. We have no conception of how many millions of children have had ordinary colic, and I refer to the green apple or

other indigestible material as producing colic, which is an acute indigestion, and yet how inexcusable it would be not to remove the cause of this; and you say we should teach our people not to give purgatives when our children have the bellyache? Gentlemen, it is not common sense. Common sense teaches using the practice of medicine to remove the cause of disease. The fact that the mothers have administered these purgatives and the colic persists, arouses our suspicion, and is the first evidence or first proof for suspecting the existence of obstruction caused by the acute indigestion or colic. The parents will tell you that they have given the child a dose of oil or salt or one of the numerous purgatives, and got nothing passed through the bowels. Then it is a question for the doctor to decide. The family have already partially made the diagnosis for us. It is a question, then, whether the doctor himself should give any purgative or administer enemas. As a rule, when we are called into the case we find not only purgatives but enemas may have been given with no success. It is good practice in the practice of medicine to always try to remove the cause. Sometimes we find paresis of the intestines from intestinal indigestion; there is a complete lack of peristalsis. We all see these cases in our every-day practice where they are relieved sometimes by purgatives or enema. We cannot open the abdomen every time we find that the child or patient has a bellyache. The people won't have it done. I do not agree with the gentleman who spoke about not giving purgatives. Of course, if we have a suspicion that there is an intestinal obstruction, it would be folly, it would be criminal then to give a purgative to add more to the condition that is already existing. I do not agree with Dr. Burch, who says that these people are likely to die from thirst, because my opinion is and always will be that they die from toxemia, for we can overcome thirst by normal salt enema. The power of resistance is lessened, just as it is in the cases of appendicitis and in purulent conditions that exist there, but in these cases we have nature to help us out by building up the leucocytes, and we find that when so many of these little fellows help us out we have so much better results in cases of operation for appendicitis, because we have got millions of leucocytes to defend and support the system. We have not only the normal leucocytes, but billions of extra ones to destroy the poisons that exist there. Therefore, this condition of toxemia in obstruction shows that there is more agreement between the physician and surgeon. Everybody is satisfied that the only thing to do in a case of intestinal obstruction is to operate, and the recovery of these patients is in inverse ratio to the earliness with which we operate. If we are sufficiently educated to find out or to ascertain within six hours that intestinal obstruction exists and operate promptly, I believe we would

have 100 per cent recoveries; that if one could operate within six hours after perforation had taken place the death rate would be practically nil. It behooves us to learn then how to make an early diagnosis, and the quicker we operate after the diagnosis is made the better.

DR. F. B. REAGOR, Shelbyville: There is one thing that occurs to me in cases of intestinal obstruction, while contrary to most teaching, and that is in place of having peristalsis increased above the seat of obstruction, we have it abolished, and the moment the lumen of the gut is obstructed, then peristalsis is arrested, the muscular coat of the gut is paralyzed, the gut is dilated and is filled with gas and fluid above the obstruction, and if you pour oil and purgatives in with this condition they will not do harm, because they will not pass on, and in place of producing peristalsis they produce emesis or reverse peristalsis, if, indeed, they do not lie dormant in a dilated and paralyzed gut. You may open the abdomen and find that the bowel is dilated and full of matter above the obstruction. My opinion, then, is that in giving simple purgatives in these cases of obstruction it does not do the harm we might think because of inability to produce peristalsis in an already paralyzed gut.

DR. W. M. M'CABE, Nashville: I had not intended to say anything on this most important subject, as Dr. Bryan has covered the ground very thoroughly, but I want to say a word in regard to purgation and constipation. If one will take the mortality statistics covered by the census bureau of the United States Government, he will find that the mortality from constipation is practically nil. On the other hand, if we had statistics which were definite in regard to the administration of purgatives when they were not necessary and especially in cases of intestinal obstruction, we would find the mortality extremely high.

In regard to Dr. Reagor's assertion that peristalsis is stopped after intestinal obstruction, I want to say that one of the pathognomonic symptoms of intestinal obstruction is the peristaltic wave above the point of obstruction, giving us a rise and fall. The mortality from intestinal obstruction is largely due to procrastination. I know it is a very hard thing sometimes for a surgeon to operate on a patient immediately. We procrastinate by giving them castor oil, epsom salts, and in the meantime pray that the bowels move, and while we are praying our patients are dying. No one in this association takes intestinal obstruction to heart more than I do. I am placed in a position where I see cases of intestinal obstruction coming into the hospital who have received purgatives, who have received enemata, who have received everything in order to open their bowels, and who at the moment they enter the hospital are dying.

This is a preventable condition. It is a condi-

tion that ought not to exist in this community. It ought not to be in this state. It is a condition which can be prevented, and I think it would be wise for us to go on record at this meeting as condemning the use of purgatives in all conditions of abdominal pain before an absolute diagnosis is made. If Dr. Holtzclaw has a history of an individual who has eaten a green apple and he has a case of ordinary green apple colic, all right. It is not necessary to give that patient purgatives. If he will wait a few hours nature will produce the purgation. I do not believe you do that child much good by giving castor oil or epsom salts. You may give him tincture of opium or something of that kind, which would do as much good. We do not object to the administration of purgatives after you have made a diagnosis of green apple colic, or if you are sure you are not giving the patient something that may result in death.

DR. M. C. M'GANNON, Nashville: This subject of purgation is probably one of the most important that will come before the meeting because it is so common not only with the laity but with the profession to administer purgatives in cases of abdominal pain. I have been in the habit of stating positively to students, and I am stating it here now, that I believe there is absolutely no place for a purgative in a case of abdominal pain, and especially a pain of a colicky character. If you stop to consider what the pathologic condition is that is producing the pain, or what the physiological condition is by which pain is brought about in case of intestinal obstruction, you will find that the gut is acting too powerfully and the pain results from over-action. It does not make any difference whether it is due to eating green apples or to some other form of obstruction. The gut is over-acting and the administration of purgatives is whipping up the over-acting animal. If that be true, there cannot possibly be any use or indication for purgatives when the intestine is already doing more work than it ought to do. Nature's efforts is to overcome the obstruction and it is throwing wave after wave against the obstruction to overcome it. If it is a question of intestinal irritation, nature is already bringing about too powerful peristaltic action to empty itself of the offending material. One must remember, furthermore, that a purgative acts in one of two ways, first by throwing out an extra amount of watery material into the intestine, or producing an amount of intestinal action depending upon the purgative used. If that be true, it follows that if you administer a purgative in a case of obstruction you increase the amount of watery material that is in the bowel, and that you also increase the peristaltic movement when it is already too strong. You cannot overcome it in that way. You should remember, also, that the intestinal contents, until it reaches the large intestine, is fluid.

You can readily see that there is no object in pouring into the intestinal tract more fluid, especially in cases of obstruction, or in the case of no obstruction where it is irritated by some foreign substance. Nature will empty the gut if you will give it time. If you want to assist nature, you unload the lower bowel by enema and give an opiate to relieve pain. In most instances you are called upon because the patient is suffering too much and you are expected to relieve the pain, and an opiate is much more capable of doing that than a purgative. The only condition in which I can conceive of a purgative being called for at all is when a patient is having diarrhea associated with pain. If you have a patient suffering with pain and diarrhea at the same time, castor oil and opium added are of value.

DR. J. W. SANDFORD, Ripley: If I should send for the biggest doctor in America, and he looked at me and did not give me anything for a severe pain, I would send him away and call for an old granny. (Laughter.) That is what I would do. When a patient is doubled up with pain and you are sent for, he wants relief, and, if necessary, you should give him a hypodermic of morphine to afford relief. I do not give these suffering patients hypodermic tablets. If a patient has a colic, and it takes the average surgeon about three days to find out whether the colic is due to appendicitis or to intestinal obstruction, you are not going to allow the poor devil to roll about in agony. It is not good practice. It is not common sense. Gentlemen, if any of you have ever had a colic you would feel the necessity of doing something for your patient. You do not want to turn him over, give him salt solution, or stick something up his rectum. What good will that do? When you have peristaltic action, and when the patient vomits, you do not aid the condition by giving something else to throw it off. Even if you get intestinal obstruction, you want to stop the physiological action by opium, and when you have peritonitis you want to put the belly in a splint, and then if you want to, you can open every man's belly you desire, but look out, be careful, you want a good surgeon to do it.

While in Chicago with my colleague and friend he had a colic; a diagnosis of appendicitis was made, but I got him easy in twenty minutes. I saw a surgeon there operate on a woman for appendicitis, and when he got down to the appendix there was nothing the matter with it.

DR. H. A. CHANCE, Cumberland Gap: This is a perennial subject for discussion. It seems to me, what we want to do is to determine as quick as possible whether a patient with severe pain has intestinal obstruction or not. I learned my lesson a long time ago in this regard.

Four or five years ago, as Dr. Holtzclaw has said, we gave cathartics, and at about that time I was called to see a poor fellow with severe pain

in his belly, and I felt like giving him a purgative again, but I say now, this is the last time I will do anything of that kind. I do not think I will ever change unless I see new evidence. Dr. McGannon has made the condition as clear as it is possible to make it that nature is doing her best to get rid of the offending material. If it is due to the eating of a green apple, to too much pie, nature is trying to show what she can do from above, and what is the use of aggravating the condition and making it worse? If you have a pain in the abdomen and you have a peristaltic wave, which you can get very early, wash out the stomach as well as the lower bowel. The only patient I believe I ever saved was one in whose case I began inside of twelve hours after the onset of the attack to irrigate the stomach, and kept it up for six or seven hours until the patient went on the operating table. Others have died, regardless of whether they were operated on or not. If you do not get your cases of acute intestinal obstruction in twenty-four hours, you may just as well not fool with them.

DR. JOHN A. WITHERSPOON, Nashville: There is nothing to be said along the line of purgatives; we all agree as to their use, and I heartily endorse every word Dr. McGannon has said. I do believe sometimes in enemas. An enema may assist in emptying the lower bowel; but the great difficulty with all of us internists and surgeons is the diagnosis. It is not a question of purgatives. In the majority of cases of obstruction nature takes care of it by immediately vomiting the material up when it does not pass through the natural channels. The diagnosis is the difficult part. Dr. Burch struck the keynote when he spoke of abdominal pain, with subnormal temperature. I want to add to that paroxysmal pain—pain that has periods of cessation, and then starts up like a natural wave of peristalsis. Then the absence of movement of the bowels helps. When you talk about the facies of intestinal obstruction, when that facies comes, you have already passed the time of operation. Whenever you get a tense, rapid pulse and the Hippocratic countenance with the upper lip drawn up, and a sharp line of demarcation at the ala of the nose, you are then into peritonitis and possibly beyond the possibilities of surgery.

I saw a case a few days ago that Dr. McGannon operated on. That man was taken with a sharp pain the belly; it came in paroxysms; he commenced to vomit. He would have periods of perfect ease. His face was as calm as anyone's; his belly was perfectly soft; enemas failed to empty the bowels. A diagnosis of intestinal obstruction was made, operation done, and the life of the man saved. A loop of intestine was the cause of the obstruction, not a band. That man had a subnormal temperature; he had pain in the abdomen of a paroxysmal nature; the bowels ceased or refused to act of their own volition.

I do not believe in the use of opiates, but I do believe it is well enough to ease a man's sufferings; but if you have a patient with a paroxysmal pain, with a subnormal temperature, and you fail to recognize that it is due to appendicitis or gallstones or to perforation, you had better go into that belly on general principles. That is my idea of intestinal obstruction; and do it quick.

DR. RICHARD A. BARR, Nashville: I would like to ask Dr. Witherspoon if the case he referred to had any morphine before operation.

DR. WITHERSPOON: I do not know, doctor.

DR. M'GANNON: He had morphine after the diagnosis was made and it was determined to operate. He was given morphine two hours before the operation was done.

DR. BARR (resuming): I was struck in the early part of this discussion with the care with which the mention of morphine was avoided. Every man who has discussed the subject gives morphine, and gives it promptly in cases of acute abdominal pain, and yet we are all afraid to come out frankly and state that fact. I believe with Dr. McGannon fully that morphia is indicated for the relief of pain, and, furthermore, that it will do good in cases of mechanical obstruction, because one of the very serious conditions is the violent peristaltic movement which takes place, most of the damage being done in that way. In some instances we have a strangulated coil of intestine, but in every case of intestinal obstruction we do not have strangulation of intestine. In nearly every case we do have a violent peristaltic movement of the bowel, this doing the patient the most damage, interfering with blood supply and circulation of the bowel. Some think it is necessary to wait until after the diagnosis is made before giving morphine. When a man is rolling around in bed or on the floor with severe pain, I can see no objection to giving him enough morphine to quiet him. Certainly, after the patient's pain is relieved you can get an intelligent history and make a more intelligent examination.

In an effort to give a perfect pathognomonic, symptomatic, diagnostic picture of obstruction, it is impossible to cover even a large percentage of cases. Of course, in cases of the kind mentioned by Dr. Witherspoon the diagnosis is easily made, but it is not so simple in other instances, and every surgeon frequently operates for other conditions and finds intestinal obstruction. The main trouble is in differentiating between appendicitis and intestinal obstruction. The delay in operation in cases of intestinal obstruction is the delay resulting from a diagnosis of appendicitis with an effort to cure appendicitis without operation. If we could get rid of that feature of handling appendicitis as a medical condition originally, and operate on appendicitis as promptly as we do for obstruction, it would simplify matters a great deal, and we can never get at the

early treatment of intestinal obstruction by attempting to make certain definite diagnostic symptoms as evidence of the condition. A flat belly with shock, paroxysmal pain, and persistent copious vomiting are characteristic; but you may have abdominal tenderness, no matter how early you see the patient. You may have rigidity and every symptom of inflammation, and in the presence of these symptoms you cannot exclude obstruction, and there is no use in trying to make an absolute diagnosis on the symptoms referred to by Dr. Burch.

DR. J. W. BRANDAU, Clarksville: I think no less an authority than Moynihan recommends the use of one sufficiently large dose of morphine to relieve the suffering of the patient. It not only relieves the pain of the patient, but it helps to make the diagnosis.

If we suspect obstruction of the bowel in an acute case and we can give relief with morphine and with no return of the pain after the initial dose, we may use that as a pretty good working rule that the patient will not require an operation for intestinal obstruction, because if the trouble is due to intestinal indigestion it is not likely the pain will return after having been relieved by morphine, but if pain should return and our patient has a subnormal temperature with eructation and vomiting, I think we need not hesitate any longer in our diagnosis; and I think we ought to make a diagnosis within a few hours. Of course, the important thing is the diagnosis. We all know that the clinical picture of a case of intestinal obstruction after a few hours is different from that of colic.

DR. E. T. NEWELL, Chattanooga: I think the physician recommends a special line of treatment because he thinks that particular treatment will give a higher percentage of cures than any other percentage of treatments. If we figure that about 90 per cent of all pain in the abdomen is not due to intestinal obstruction and due to other causes, and that it can be relieved by the use of a purgative or laxative, and give them, then we are going to cure more people than if we hold back the administration of a purgative. There is nothing more reasonable than for the practitioner at home to give a patient something to open the bowels, because the majority of the cases are not instances of obstruction of the bowels. Of course, that does not apply to the physician who usually gets a complete history of the case, and has some idea of what the condition really is. There is no question but that in cases of intestinal obstruction purgatives do harm, but to allow the impression to go out from this association to the people generally that no man that has a pain in his belly should have a purgative is simply preposterous to my mind. To the physician who has had cases and who knows what intestinal obstruction is, or if he suspects obstruction, it is an entirely different question.

DR. C. N. COWDEN, Nashville: This subject of pain in the abdomen and the use of purgatives is always one that provides a lively discussion, no matter where it is held, and there is no question in my mind as to how it ought to be decided and it has been decided from personal experience of how it ought to be. If you will stop for a moment and analyze the cause of pain in the belly, you will see that it gives us very little inflammation. Pain in the belly is caused from one of three things, first, an irritated substance on the inside of the intestinal tract; you have obstruction there, or third, you have an inflammatory condition going on. You can put all kinds of pain in the belly under one of these three heads.

As to the use of purgatives, the average practitioner will go away from here thinking that he will not use them; that there is something in the minds of men in regard to purgatives to this effect; that whenever he can get a man's bowels to move that man will be relieved. Let me say to you that the man is not going to die because his bowels do not move. Get that point into your heads straight. That is common sense. I have seen patients go for weeks without having an action of the bowels and they did not die. A man is not going to die simply because his bowels do not move at a certain time, even though it be a week or much longer. How does a purgative act? You have excitement going on in the man's belly.

Metz conducted a great many experiments in which he found that all purgatives acted by their irritating influences upon the mucous membrane of the bowel; that they do not act by causing a large amount of watery secretion to be poured out, but the patient has that watery secretion without the action of a purgative. It acts because it stimulates the mucous membrane or the terminal nerve filaments at that point of the intestinal tract. With what is given the bowel is stimulated to the condition of spasm. You have a circular spasm with exaggerated peristalsis above that, and what good does it do to stimulate the muscle more? It cannot get it through because it is stimulated to the point where spasm has taken place. You will find it is indicated and frequently that a man's bowels will not act under a small dose of morphine. If you carry it on you prohibit the peristalsis, and you will not get a motion from the bowel. A small dose of morphine will take the edge off of the pain; it will relax the circular fibres of the muscles that go around the bowel. When a patient comes to you with any of these conditions which demand operation, whether it be inflammatory or not, I think an operation should be done.

DR. W. K. LACKEY, Ripley: There is one question that has been forgotten, and that is re-

flex pain. We can have a pain in the abdomen and yet have the pathology in the pleural cavity, and I do not think anyone has mentioned that point. I remember seeing four physicians get into mighty deep water over that one thing, and that is why it has made an impression upon me. They operated on a man for appendicitis after keeping him four or five days without operation. It was found that he had a subacute pleurisy.

I think it is Fathergill who tells us about reflex pain in the abdomen. We do not differ on anything except the diagnosis. If we knew that the colic was due to eating green apples, we would give a dose of castor oil, and if it was a reflex pain, we would give a dose of morphine, but it is very essential to find out the trouble and we all agree as to what to do when we find it out. We have got to find out, and it is a good plan to relieve a patient's suffering and then meditate over what we have.

DR. BRYAN (closing): The point I wanted to impress was this: all of us, whether we are physicians or surgeons have to deal with intestinal obstruction early or late, but at the present time we are getting a mortality of 50, 60, 70 and even 80 per cent because of delay in operating, when with early operation that mortality ought to be reduced to ten per cent, or possibly less. When you are telephoned for at night by some one who says that a man is suffering terribly, you naturally ask him what is the matter. The reply is, he has a pain in his stomach, and you say, "Give him a dose of castor oil." Did you ever say that? I have.

DR. HOLTZCLAW: It is common sense.

DR. BRYAN: If he telephones you the next morning that his bowels have not moved and you give him salts, and still his bowels do not move for 36 or 48 hours, a surgeon is called in, and finds that the abdomen is distended tightly, and that the patient is vomiting fecal matter 36 or 48 hours after the onset of the attack. Now, gentlemen, the surgeon cannot save many of these cases. It is not fair to him to expect it, and it is not fair to the physician. I have a case in mind in which two doctors were called and agreed that the patient had intestinal obstruction. They recommended operation. The patient refused. The doctors said, all right. As soon as these two doctors had gone home he went to an osteopath, who said he could relieve cases of intestinal obstruction. He tried to do so in this case, but failed. After twelve to twenty hours he sent for his physician. I was called, operated, and at the operation found the intestines had been bruised by the manipulations of the osteopath. This patient had not had a purgative.

The point I want to impress is this, that if we are to save more of these cases of intestinal obstruction, the surgeon must get them earlier than he usually does.

CHRONIC INTESTINAL STASIS.*

By E. M. Sanders, M.D.,
Nashville, Tenn.

The subject of intestinal stasis, with its associated symptoms and conditions, is familiar to all of you who have followed the pioneer work of Lane, which has been taken up by Jackson, Coffee, and others. Recent medical literature is giving us more satisfactory reports of this work by men of large experience than I could possibly give you.

For this reason I will not burden you with an abstract of the extensive literature on the subject. The most comprehensive review of the physiology and pathology of the subject is given by Coffee in the October, 1912, issue of *Surgery, Gynecology and Obstetrics*. Arbutnot Lane has been working and writing on intestinal stasis for years, and has had a hard task convincing the medical world that he has done something worth while.

There is great danger of over-enthusiasm, and a new field for reckless surgery that should be guarded by conservatism and judgment. Every medical man should read "Mumford's One Hundred Surgical Problems," Lane's persistent and painstaking work, and Coffee's brilliant reports. He would then see hope for a class of patients who have drifted from one doctor to another, who have taken the rest cure, and have at last fallen into the hands of some surgeon who promises almost certain cure by the removal of the appendix, but who find that they are still as miserable as before. The prominent symptoms observed in this class of patients are extreme loss of flesh, stooping shoulders, prominent lower abdomen, constipation, sometimes alternating with diarrhea, headache, painful joints, falling of the hair, etc., and extreme weakness, unfitting them for the ordinary duties of life. On examination they will be found to suffer from a ptosis of all or part of the abdominal viscera. This condition, as you all know, is readily confirmed by X-ray pictures after a bismuth meal. With this accurate aid to our means of diagnosis, we ought to make fewer mistakes, and our treatment should become more satisfactory. We are now better able

to say which patients should be treated medically, which should be given medical treatment before being given over to a surgeon, and which are in such condition that it is probably useless to try medical treatment, and are surgical problems only. We find the surgeons generally like to send them back to the medical men, and the medical men like to send them back. It is hard to believe that the eminent men in the medical profession could have been so slow in observing these cases met with almost daily. In former years, and even now, appendectomies—done through small incisions on a certain class of patients, and evidence of chronic or acute diseases found—yet the patient derives little benefit from the operation. In such cases the work has only been partially completed, and extreme ptosis of the colon, or colon and stomach, a Lane's kink, or Jackson's membrane, constricting the transverse or ascending colon, has been overlooked. A duodenal kink may be responsible for the condition, obstructing the normal output of the stomach. These kinks are believed by some workers to be caused by the tugging of the prolapsed colon on the ileum, especially if the ileum has a short mesentery, causing a partial stricture of the duodenum by the mesenteric artery. This brings about a train of symptoms not observed in the ordinary prolapsed colon cases. These symptoms are seen and easiest recognized in acute dilatation of the stomach and duodenum after abdominal operations, and are usually relieved by frequent lavage. In the chronic condition, vomiting of the stomach and duodenal contents is usually persistent. Patients, on account of inability to retain food, suffer from lack of nourishment, lose their strength, and drift into chronic invalidism. These patients are all improved by rest in bed, or rest in bed after meals. The rest cure, with massage, has probably done most for them, especially when they take on flesh. There are some who have tried all such treatment, and are still invalids.

It is for this class of patients that Bloodgood has proposed and carried out a treatment that has been very successful in his hands, viz., removal of the dilated part of the colon. The patients on whom Lane, Rov-

sing and Bloodgood have operated by such hazardous procedures have been in extreme condition, and their results show that the operation, serious as it is, is justifiable. In the treatment of these conditions, one surgeon may remove or short circuit the colon, another may elevate the colon, and stitch the omentum to the abdominal walls, thus holding it in position, another do the Rovsing gastropexy, and from this very radical surgery, which must be approached with great caution, many surgical procedures have been advised by as many men to remedy the anatomical defects. In some cases it is no doubt harmful to destroy the pericolic membrane, and in other cases it must be quite important to do this, as a distinct band is often found at the upper margin of the membrane. When this exists, it of course must be destroyed. In some cases an enormously dilated caecum is found below the stricture, which, of course, must be dealt with in one way or another. We have found that a transverse plication of the distended colon, bringing into opposition two of the longitudinal bands by interrupted linen sutures, and anchoring the newly-formed normal-sized colon to the lateral wall has given satisfactory results. The fact that this condition does exist has taught us to abandon the criss-cross incision, except when operating on acute cases, for with the long right rectus incision one can usually determine whether or not there is mechanical pathology in the intestinal tract, aside from whatever disease may be found in the appendix and gall bladder. In support of a moderate amount of this work we have done, I beg to report the following cases:

Miss A. M., 22 years old, school teacher for two years, came to the hospital two years and three months ago, with diagnosis of chronic appendicitis. Family history good, and personal history threw no light on her trouble. She was quite thin, some stooped, somewhat nervous, had slight mitral lesion, had nausea and vomiting, had a trace of albumin, suffered from great weakness. A general ptosis was all that could be made out in the abdomen. She had had no distinct attack of appendicitis, and diagnosis could not be made of gall bladder disease, or ulcer of the stomach or duodenum. She was, therefore, sent

home and given absolute rest and forced feeding. She required large doses of purgatives to relieve her constipation, and got little benefit. She came back in three months slightly improved, but still unfit for the ordinary duties of life. After much consultation, she was returned home again, and sent to the mountains for the summer, with new tonics and instructions. She returned in two months, quite despondent, in practically the same condition, and contended that she was gradually growing weaker, as she could not eat as well as she could a year before, and suffered more from nausea and vomiting as time went on. Through a right rectus incision we removed a normal appendix, found the gall bladder normal and did not drain it, found no evidence of gastric or duodenal ulcer, and no other pathology except a band four to five inches around the ascending colon, beginning about four inches above the appendix and extending to the hepatic flexure. This was a typical so-called Jackson's membrane, attended with a high degree of inflammation, and at the upper border a thickened narrow band was found constricting the colon to about one-third its normal lumen. This was divided, the caecum turned in as described above, and the patient made a satisfactory recovery after the third day. Up to this time she was quite nauseated. This patient returned to her home, and regained her strength so rapidly that she soon returned to her work, and I have a letter, written ten days ago, which says that she is now able to eat practically anything she wants, that she sleeps well, feels strong enough to carry on the ordinary duties of life without fatigue, she has no nausea or vomiting, has gained eighteen pounds, has no albumin at this time in her urine, is greatly relieved of the shortness of breath, and her lesion is distinctly improved.

I will report only one other case of this type, which is as follows:

Young man, 25 years old, who does clerical work. Was well until three years ago, when he began to lose weight and have indigestion and obstinate constipation. This condition went on until he became nervous, slept badly, felt tired through the day, could eat only small quantities of certain articles of diet,

and gradually developed pain in his right side. Felt most in the region of the gall bladder. His condition became more and more distressing, and he lost his hair until he had practically none left. He finally had a distinct soreness in the region of the appendix, and his doctor diagnosed appendicitis, as he had a little temperature and well marked localized tenderness. Through a right rectus incision, a perfectly normal appendix was removed, no kink was found at the terminal end of the ileum, his gall bladder, stomach and duodenum was normal, but a well marked pericolic membrane was found extending about three inches from the hepatic flexure of the colon towards the middle line. About the middle of this membrane a distinct band was located, which constricted the colon to about one-fourth its normal size. The band was severed, the membrane turned back. His nausea was distressing for about four days, at which time his peristalsis was restored, and he made a rapid recovery. This man has had no purgatives since he left the hospital, is able to eat anything he wants, is gaining about three pounds a week, sleeps well, and works well without fatigue. His hair is coming back, and he says he feels like a new man.

With the immense amount of work now being done in this field, it is to be hoped that in the near future we can arrive at more definite conclusions as to the management of these unfortunates and that the best possible results can be obtained with the least life sacrifice.

DISCUSSION.

DR. T. HUGH CARTER, Memphis: This is an interesting subject, in fact one of the most difficult problems we have to contend with, so far as making a correct diagnosis is concerned. At the same time, I wish to speak of one point in regard to the diagnosis. Sometime ago we had a case in Memphis which was given large doses of bismuth and the X-Ray used, and after several plates were made, the diagnosis was cleared up by the X-Ray. It was found that the patient's trouble was due to a kink causing partial obstruction. The large doses of bismuth helped us out a great deal.

Dr. Lawrence showed a number of pictures of different patients this winter in which the diagnosis was cleared up by means of the X-Ray and at operation the cases proved to be the same as those reported by the doctor.

This is a large field and Mr. Lane, of London, England, is the first man who called attention to it. There are other men who have done a great deal of work along this line, especially Dr. Jackson, of Kansas City, and Dr. Coffey, of Portland, Oregon. The subject should be studied thoroughly. Undoubtedly we do have a great many cases of intestinal stasis, but it is not due to a kink or Jackson's membrane, but it may be due to a ptosis of some form. Now that we have gotten the X-Ray down to such a fine point, it is a valuable aid in the diagnosis. It is wonderful how X-Ray pictures can be taken and how quickly the work can be done, and the use of the X-Ray gives us a great deal of help in these cases. In cases of intestinal stasis by watching the bismuth pass into the stomach you can decide whether or not there is ptosis.

DR. E. E. REISMAN, Chattanooga: I would like to say a few words in commendation of Dr. Sander's conservative idea in regard to operation. As he has stated, this is a fertile field for the overzealous surgeon, and I think much can be done in the way of harm. There is no doubt we do have cases which demand surgical relief; at the same time, many of them diagnosed as chronic intestinal stasis, undergo surgical operation with no relief. The particular cases he refers to are the type that are most suited for surgical relief.

I heard Dr. Jackson's paper in Chattanooga last year and up to that time I had never seen the Jackson membrane, and it was only in the last month I had ever seen one in my own experience. This case was seen by three different men, and a diagnosis of chronic appendicular trouble was made. On opening the abdomen we found a well defined membrane which offered mechanical obstruction in the colon and the membrane was divided and removed. The appendix was removed also, although normal. The patient made a satisfactory recovery, although he never had appendicitis. I think a conservative position to take in reference to this procedure is the one to be recommended, and not the radical.

DR. SANDFORD, Ripley: I would like to ask the surgeons present if they have ever tried Turck's hot air in the colon in these troubles. I have not heard any one mention that. I had a case about 18 months ago that went to an abdominal surgeon who removed the appendix. The poor fellow still had his pain. He had all the symptoms Dr. Sanders has described. He was treated by one of our local men who said he has ptosis of the stomach. His stomach was washed out with Turck's double tube with hot water, and he followed that up with hot air. The next day I had his rectum treated with hot air after a large enema had been given. I never saw a man improve so much. He is now in good health and able to work.

DR. A. B. COOKE, Nashville: This subject is one of the most important that has been brought

before the society, and I regret there is not a larger attendance of surgeons to discuss it. I am also sorry that some of our noted internists do not care to speak on the subject. It is a complicated problem and was first presented to us by Mr. Lane, to whom credit is largely due. It is the biggest problem that confronts the medical profession at the present time. It is also an unsolved problem. Those who have had opportunity to read Mr. Lane's writings on the subject, and I am glad I have had that opportunity, will have observed that he says toxemia or auto-infection resulting from intestinal stasis is probably the underlying pathology or etiology, if you please, of a large proportion of all intra-abdominal lesions, among which he names not only diseases of the stomach and duodenum, but of the gall-bladder and appendix. He goes a step further and says that undoubtedly in a large proportion of cases chronic diseases of the pelvic organs, particularly in women, find their etiology in this same condition of intestinal stasis. He further says that certain cystic degenerations of the mammary glands undoubtedly have the same origin, and then by way of summary says that a large proportion of the cases which are termed neurasthenia at the present time, if properly investigated, would be found to have their origin in this same condition of chronic intestinal stasis. Mr. Lane is not always done full justice when this subject is up for discussion. He is known largely as a radical advocate of surgical work in this field, but such is not his teaching. I had the pleasure three or four years ago of seeing him at work and of going over a large number of cases upon which he had operated in the wards of Guy's hospital. The operations by which he is known and for which he is generally quoted in this country are short-circuiting and colectomy. He says in so many words that this operation should be reserved as a dernier resort for those cases otherwise absolutely hopeless, and he does not recommend them as routine measures in any class of cases.

The writings of Coffey, of Portland, following those of Mr. Lane, have illuminated the subject in our own country. He is known as a conservative man, as well as a brainy man. He has done much to put the problem of intestinal stasis on a proper basis, and the steps which should be taken for its relief upon a scientific foundation.

Until a few years ago I had never seen a case in which the Jackson's membrane was present, and by the way, I will stop for a moment and give you what Mr. Lane says is the true etiology of these membranes. He says they are not adhesions in any sense of the word; that they are more or less normal structures which are developed to overcome resistance; in other words, he calls them crystalizations of lines of force that are developed by nature to hold and to support and to sustain in the abdominal cavity the dis-

tending and sagging and overloaded colon. I had not seen many of these cases until a few years ago, when I began to see these membranes, and since then I have seen quite a few in my own work. Those who keep their eyes open and follow the suggestions outlined by Dr. Sanders of making a right rectus incision in appendectomy will find them more frequently than they have any idea of.

The cases reported by Dr. Sanders are a little unusual in one point, namely, the terrific amount of nausea and vomiting that followed the operative work. I cannot conceive of any adequate explanation of why the incision of the bands or membranes should result in this excessive amount of nausea, and I do not believe that it will be found to be a phenomenon that will occur frequently in our practice. I do not think any one need be told that where we have intestinal obstruction it ought to be overcome in some way; but if we take a larger view of the question and realize the far-reaching effects of autointoxication upon not only the adjacent organs, but the entire human economy, I think we will have all the encouragement and justification we need for further investigation along this important line.

DR. SANDERS (closing): Dr. Livermore has asked me to tell you how the bands and raw surfaces were covered over without making the lumen of the intestine smaller. The soft part of the band or that part of the membrane itself is divided with gauze, and then the more dense bands are cut with scissors at either end, and where they bled a little they were crushed and ligated, and the whole area smeared with sterile vaseline.

We do not think much of the Cargile membrane, and that is all we did for the raw area thus far.

With reference to the remarks made by Dr. Cooke, I have had fifteen or sixteen cases, but I reported only two. We have had serious nausea and vomiting, but I reported the cases as they happened. The reason I reported these two cases is because there was absolutely nothing wrong with these two patients, one woman and a man, except this band. We have had a number of cases where we have had other things to deal with or where we found other pathology. I have had one patient who had an infantile uterus. She had serious dysmenorrhea, and I did a hysterectomy on her. She has not vomited at all. She is so well now that one would hardly know her. She has an entirely different expression. That may be all due to the hysterectomy. She did not vomit a single time.

Going back to the X-Ray work in these cases and in answering Dr. Carter, I beg to say that fluoroscopic examination of these patients is the most satisfactory. We hope to develop that and use it more frequently. It is a more satisfactory way to make the diagnosis.

In regard to the remarks of Dr. Reisman, we have operated on no cases except those where we made a mistake in diagnosis. In other cases there was stasis. There was one girl in the hospital who vomits whenever she sits up, but she keeps everything down when she lies down. We are going to send her back home soon. We tried medical treatment on all these cases first before resorting to surgery.

With reference to the incision, I would like to say that I do not use the right rectus incision on any case of acute appendicitis. If I think the patient has a membrane or obstruction or a veil or band and develops acute appendicitis, that patient is much more likely to get appendicitis than one who has not got such a band. He has got a trauma and in that case I make the criss-cross incision and remove the appendix. If you use a right rectus incision in an acute case, you have got a mighty bad condition. We do not want any pus in the wound through a right rectus incision, as it is troublesome. The criss-cross incision in the acute case where there is infection will give less trouble.

In regard to Dr. Sanford's remark about the hot air treatment, I have tried it for everything except this trouble.

CAECUM MOBILE, CHRONIC APPENDICITIS AND THE PERICOLIC MEMBRANE.

John M. Manry, M.D.,
Memphis, Tenn.

Since 1899, when Ewald described chronic appendicitis, until within the near past the caecal appendix has been regarded as the etiological factor in all cases of chronic discomfort and pain in the right iliac region in which disease of the right uterine appendage could be excluded.

The minds of the profession were doubtless prepared for the acceptance of this hypothesis by the fight which had been waged, and about this time conclusively settled, to prove that the appendix was the etiological factor in acute affections of this region.

Closer observation, however, and a more careful analysis of the late results in cases of appendectomy for so-called chronic appendicitis has shown that a considerable percentage of these cases are not relieved by removal of the appendix.

In a report of 640 appendectomies done at the Massachusetts General Hospital for both acute and chronic cases, Scudder and Goodall give the following final results: They estimate that about 331 were chronic cases, but as only those cases in which drainage was used were counted chronic, it would seem that this percentage was rather high. Be that as it may, there were 13 cases in which the appendix was described as normal, 38 cases had from one to thirty post-operative attacks similar in character to those experienced prior to operation, and 88 cases (13.7 per cent) suffered discomfort "which was of varying degrees of severity." It was thought that this discomfort could be accounted for by post-operative adhesions, a surmise which is discredited by the fact that so few cases re-opened for other reasons after appendectomy show adhesions, and a closer study of the right iliac region reveals the fact that other pathologic conditions frequently exist here by which this discomfort can be more logically explained.

In 1908 Jackson described the pericolic membrane as he found it in a case in which the appendix and right ovary had been removed without the symptoms having been relieved. His report of this case and others probably first drew attention to the pericolic membrane as an etiologic factor in chronic right iliac conditions, though Binnie and others had previously described the membrane without ascribing to it any particular significance.

By most writers the membrane is considered of inflammatory origin; and in some cases omentum adherent to it, or to the appendix, or appendix adherent to abdominal wall, or caecum would apparently confirm this supposition; but it is probably true that these adhesions are but co-existent and the result of an inflammation which is secondary and not of primary import.

Regarding the membrane as the result of pericolicitis, Coffee in his classical article on the surgical treatment of gastro-intestinal ptoses, states that "the great majority, if not all, cases of membranous pericolicitis are found in persons having a mobile caecum," and suggests the mobile caecum as the cause of the formation of the membrane. I have

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repeatedly demonstrated the presence of the membrane in cases having no clinical history pointing to a pathological process which must have existed to have caused the formation of the membrane were it of inflammatory origin.

The caecum, in the embryo, is primarily a mid-line organ which, by a process of rotation, is first brought over to the right hypochondriac region and as its growth progresses descends to its normal location. During this change in position there is a change in the attachments of the mesentery of the larger bowel and a fusion of certain peritoneal layers. Incomplete fusion of these peritoneal layers, which are to form the ascending mesocolon and mesocaecum, results in the persistence of an extra layer of peritoneum, incomplete histologically, which exists as the pericolic membrane.

The membrane, as I have found it, is not a smooth layer stretching from the parietal wall over the anterior face of the bowel, but has here and there narrow bands which are thicker and shorter than the more membranous portion, and whose effect is to bind and constrict the colon or caecum, especially when its own weight causes a downward traction. When the membrane exists on the appendix, and I have found it there more frequently than higher up, it is usually in the form of a band, resembling an adhesion, fastening the appendix, rather loosely, near its middle to the floor of the iliac fossa, and as both distal and proximal ends are free, a decided kink is formed in the appendix at the site of the insertion of the band.

The caecum is normally more loosely attached than any part of the ascending colon and, in fact, may be termed a movable organ. Its rotation and descent give rise to opportunity for wide variation in its final fixation; in some cases being bound closely to the iliac fossa, while in others it may be easily displaced to the left half of the abdomen and yet be normal in that it does not cause symptoms. In an examination of 105 cadavers, L. Dreyer found in 67 per cent a movable caecum. All stages of mobility occurred from cases where it reached to the promontory of the sacrum to those wherein it could be brought over to the left anterior superior spine and to the costal arch. From the fre-

quency of its occurrence he therefore concludes that it is difficult to consider a movable caecum, *per se*, a pathological fact. Stracheseo states that a movable caecum does not in the majority of cases cause symptoms and that it is comparatively common. Hausman having, in six years, collected 143 cases. This conclusion is entirely in accord with my own, based upon my observation on living subjects; and I regard the mobile caecum in its pathologic role to be dependent upon other factors.

French and German literature contain the reports of quite a number of operations done for mobile caecum, in the reading of which one is struck with the frequent mention of the presence of veil-like adhesions between the caecum and parietal wall. No particular significance is given to these adhesions, but one cannot help regarding them as the pericolic membrane and not of inflammatory formation.

Again in several of the cases reported by Ewald in his celebrated paper, "Appendicitis Larvata," there is no doubt in my own mind that the appendix was fastened to the floor of the fossa by the pericolic membrane, as I have numbers of times found it in my own cases causing an angulation which seriously interferes with drainage of the distal portion. Thus in Case II the caecum was laterally fixed by fan-like adhesions and the appendix was firmly fastened to the pelvic fascia as far as its middle and turned back through an angle of 180 degrees, running parallel with the first portion to its point of origin.

As pointed out by Corner, because of its position and anatomical structure, the caecum is ill adapted for the propulsion of fluid contents, and there occurs in it the first physiological stasis of the fecal current after leaving the stomach. It is, therefore, admirably adapted to the development of organisms and especially so if the physiological stasis becomes a pathological one as a result of constriction by a pericolic membrane or an abnormally acute angulation at the hepatic flexure from ptoses of the transverse colon.

Pathological stasis, then, favors an accumulation in the caecum, fermentation occurs with gas formation, the organ is dilated to

a condition of atony, the mucous membrane becomes catarrhal and a physiological movable caecum becomes pathological.

I have noted some cases, in routine examination of the iliac fossa, without clinical symptoms in which the membrane was present, but not producing constriction unless downward traction was made on the bowel. This downward drag must be easily produced under conditions favorable to bacterial development with overloading of the caecum, causing it to drop in to the pelvis, producing traction by its own weight. Angulation at the hepatic flexure could be accentuated by the same means. In other words, the mobile caecum is amply able to care for itself unless there is constriction or angulation higher up.

With this condition of the caecum one readily sees how easily the appendix might become infected. In fact, on first thought, it is difficult to understand why one ever finds a normal appendix attached to such a caecum. It, however, seems able to resist bacterial invasion to a remarkable degree, and is more often found normal than otherwise. In connection with this condition the greatest etiological factor in inflammation of the appendix seems to be the kinking and consequent obstruction to drainage brought about by the membrane fastening a part of the appendix to the floor of the fossa.

Keeping in mind the fact that a pathological stasis exists in a portion of the bowel favorable to bacterial growth; with increased peristaltic action in the proximal bowel endeavoring to force outward the intestinal contents; with a resulting abnormal distension and dragging on the ligaments which hold it in place; with often a catarrhal condition engendered, a symptomatology may be constructed theoretically which can be confirmed clinically.

The condition in the beginning manifests itself in distinct attacks, which as time goes on merge into a continuous discomfort referred by the patient to the right half of the abdomen. During exacerbations there is pain of intermittent character. As a result of stasis there are reflex gastric symptoms, acid eructations, belching, nausea, and vomiting. The stomach, as it were, protesting against the ingestion of food which it will be difficult

to dispose of. There is always a history of constipation with, at times when a catarrhal condition co-exists, attacks of diarrhoea and mucous stools. From interference with digestion and the absorption of toxic bacterial products there is emaciation, mental depression and other evidences of intestinal toxæmia. Rise of temperature is usually absent and when present is, by some, regarded as evidence of inflammation of the appendix. In a recent case of my own, however, a temperature of $100\frac{1}{2}$ degrees F. was noted in which neither macroscopically nor microscopically was there the least evidence of disease of the appendix.

Palpation detects the presence of gas in the distended bowel and tenderness over the caecal region with frequently a point of maximum tenderness over McBurney's point. The radiograph after the ingestion of the bismuth meal reveals stasis in a dilated caecum.

The symptoms of this condition are, in some cases, so strikingly similar to those produced by chronic appendicitis that one is amazed to see so many operators do appendectomies, in cases of right-sided discomfort without previous acute attacks of appendicitis, through very small incisions and remove normal appendices without a thought of looking beyond.

Aside from the radiograph, the most important differential diagnostic point is the diffuseness of the affected area. There may be a point of maximum tenderness, but there is a diffuse tenderness also which is not present when the appendix only is involved.

Aaron states that continuous pressure over McBurney's point will in chronic appendicitis "produce a referred pain of distress in the epigastrium, left hypochondrium, umbilical, left inguinal or praecordial region."

S. S. Perman also states as his experience that where the appendix is much diseased firm pressure in the left inguinal region will produce a pain at McBurney's point.

In considering the treatment of this condition it is well to keep in mind the axiom that a visceroptosis not producing clinical manifestations had best be let alone, and, therefore, a movable caecum not in a pathological condition had best be allowed to care for itself.

Having, however, a pathological condition there are three conditions to be fulfilled.

1. To deal with the appendix.
2. To remove the cause of the pathological stasis.
3. To remedy the impaired function of the bowel.

It would seem the part of wisdom, because of its potential possibilities, to remove the appendix in all cases whether diseased or not.

If the pericolic membrane is present it may be dealt with in one of several ways. Connel severs its parietal attachment, twists the membrane into a rope and by burying it in the abdominal wall at a more advantageous position uses it as a means of fixation of the movable caecum. This method is applicable in but few cases, as the membrane is frequently located too high upon the bowel to make it adaptable for this purpose. Some surgeons prefer to dissect the membrane entirely off the bowel and divide it close to the parietal wall, but this leaves a raw bleeding surface which invites adhesion to anything with which it may come in contact. I have contented myself with simply dividing the membrane, the released bowel assuming a position which precludes the possibility of the severed ends reuniting. Where the stasis is the result of acute angulation at the hepatic flexure from ptosis of the transverse colon, the lifting of the colon by stitching the omentum to the anterior abdominal wall may suffice, or it may be necessary to resort to some such procedure as the short circuiting of the fecal current by an ileosigmoidostomy as is advised by Lane.

The cause of the stasis being removed, the caecum, if not too greatly crippled, can be aided in regaining its functional activity by fixing it in its normal position. This may be done as recommended by Coffee with from four to eight interrupted linen sutures after lessening its transverse diameter by plication.

Considering the instability of a fixation to the peritoneum alone, Wilms incises the peritoneum to the outer sides of the psoas, strips up the peritoneum, making a pocket into which the caecum is stitched.

Dreyer objects to this absolute fixation of

the caecum and points out that during pregnancy this portion of the bowel is lifted high above a line connecting the two anterior superior spines.

Lane, who is more radical than anyone else, when recognizing "that the mechanics of the intestines have been altered to a degree that can not be rectified satisfactorily by a division of bands, etc.," severs the ileum near the caecum, removes the caecum and colon down nearly to the rectum and makes a lateral anastomosis between ileum and rectum.

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DIAGNOSIS AND TREATMENT OF GASTRIC AND DUODENAL ULCER.*

By W. A. Howard, M.D.,
 Union City.

Since the symptoms and diagnosis of duodenal ulcer and gastric ulcer of pyloric end of stomach are so closely allied and most of the important points of one will be found of no less importance in the other, and I believe

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that in most cases autopsy alone reveals the difference, I will consider these two conditions jointly.

This condition is one which is or has been, unfortunately, recognized late in the disease, and one which should, if possible, be recognized early, in order for any medicinal treatment to be of value. In some cases the diagnosis will be easy, while in other cases very difficult, and even in some impossible, except by autopsy. This is too late to benefit this individual case.

Duodenal ulcer is usually situated on anterior wall and in the first portion of the duodenum, hence is usually almost identical in most of its features to gastric ulcer of pyloric end of stomach. In a series of 262 cases, examined by Collin, 242 were in the first portion of duodenum. Mayo states that 96 per cent of his cases have been situated likewise. He also states that they came to three-quarters of an inch of pyloric sphincter. These ulcers are usually single, but may be multiple. The absolute diagnosis of many cases is perhaps impossible as is claimed by many leading physicians. While this statement, I have no doubt is absolutely true, I do believe with the careful study of these cases a much larger per cent can be diagnosed.

At the outset we are confronted with the alarming truth that this form of ulceration may exist without prodromal symptoms and may make itself known to us only by severe hemorrhage, and perhaps a fatal one, or by development of general peritonitis following a perforation. While such cases are sometimes seen, fortunately the greater per cent of them do not appear in this manner.

It is worthy of consideration to note that most cases occur in males from 25 to 50 years of age. While they may not show pronounced gastric symptoms most of them bear evidence and history of ill health, many of them giving history of gastric or digestive symptoms for some time previous to the examination, and failure to elicit existence of digestive disturbance is often, I think, the fault of the investigator. Burwinkle puts it very strongly, however, when he states that in all cases there is a history of long standing dyspepsia, in which symptoms of ulcer appear at intervals.

Vomiting is rare in duodenal ulcer, while it appears much more frequently in gastric ulcer. Acid eructations are common, therefore, patient complains of sour stomach. If vomiting does occur it will have an acid or sour odor, and rarely contain blood or bile. Pain, a more important diagnostic point than vomiting, occurs in all cases at some stage of the disease, except perhaps in some cases, as I have mentioned before, where the first symptom of ulcer is severe hemorrhage, perforation or peritonitis and in my opinion these cases are exceedingly rare where we do not have some symptoms prior to this. The pain is usually located just below the gall-bladder, and to the right of the median line in duodenal ulcer, and ulcer of pyloric end of stomach, while in gastric ulcer located elsewhere in the stomach pain is in the epigastrium, a little to the left of the xyphoid cartilage. Pressure over location of pain is very grateful in these cases, and we will often find patients bending forward with hand pressing firmly over these points, or lying on face with pillow under abdomen. Pain occurs usually three or four hours after taking food. When this is the case we can be sure the ulcer is either in duodenum or pyloric end of stomach. When pain occurs, say, in twenty minutes after taking food then subsides to recur in course of two to four hours we infer that we have ulcer of both stomach and duodenum. It is said that solid food relieves the pain of duodenal ulcer, and intensifies the pain of gastric, a statement, which I have no reason to doubt, for it is plausible enough. It is interesting to note how quickly the patient returns to normal after the subsidence of the pain. The patient feels usually perfectly well until a recurrence of pain, which may be an indefinite interval, or as is true in most cases after a hearty meal patient will complain of pain, which he describes as gnawing, lancinating, or dull, aching pain. If symptoms of pain in the stomach, gastric hemorrhage and hyperchlorhydria are present diagnosis is assured, but in many cases pain will be the only symptom. If pain occurs only at height of digestion, and at circumscribed area ulcer should be suspected. Hyperchlorhydria in connection with continued pain should also suggest ulcer.

Tenderness can usually be elicited at these points between attacks. Boaz claims that a point of dorsal tenderness is of as much, and perhaps more, diagnostic importance than epigastric tenderness, the location of which is at level and a little to the left of tenth to twelfth dorsal vertebra. The value of this sign he states is its constancy, and that it does not exist in any other disease of the stomach or liver.

The appearance of blood in the stools is perhaps the most reliable point we have of duodenal ulcer. While vomiting of blood is much more common in the gastric form than in duodenal. The appearance of blood unfortunately may be the first sign of ulcer that we have, but I do not believe the cases are very many in which we do not have some digestive or other signs before the appearance of hemorrhage. The blood in the stools gives the appearance of very dark or black stools when this condition continues for some days following symptoms of hemorrhage, such as anemia, syncope, etc., it points most favorably to diagnosis of ulcer. At time of hemorrhage the patient may also have reflex vomiting, but the vomitus rarely contains blood in duodenal ulcer, while in gastric ulcer, especially if it be in the cardiac end of stomach, the vomitus usually contains blood. The amount of hemorrhage may be sufficient to cause immediate death, but such is not usually the case. Hemorrhage, I believe it is claimed, occurs in 75 per cent of cases.

A very reliable test for blood feces is made by mixing 20 c.c. of ether with five c.c. of softened feces, three to five c.c. of glacial acetic acid is added. The whole is poured into test tubes and extracted again with ether, a few grains of finely powdered resin of guaiac is added to the ether extract. The whole is then shaken, and 20 to 30 drops of oil turpentine added. Shaken again and then set aside, color gradually changes to violet or blue, which is rendered still more intense by addition of chloroform.

Jaundice may be present, but in the few cases I have seen I have not observed it to any appreciable degree.

The symptoms as a whole are meagre and obscure, and most writers claim that post-

mortem examination is necessary to confirm a diagnosis. This I believe is true, especially with regard to the exact location of ulcer, but the location does not matter so much as the presence of ulcer, whether it be in pyloric end of stomach, or duodenum as does the mere presence of ulcer. I believe that if we make a more careful study of symptoms and conditions we can in a very large per cent of cases discover the presence of ulcer, or be moderately certain of its presence, and in many cases be able to relieve it. If medicinal remedies fail, then advise operative interference, and in a large per cent of cases this will be the only hope of recovery. How much better is this than post-mortem finding.

Treatment—Treatment consists of absolute rest in bed so far as is possible, and in the severer forms absolute rest is necessary. Diet should be carefully and systematically regulated. Theoretically it is best to give the stomach complete rest by rectal feeding, but this strict limitation cannot be carried out in private practice, especially in the milder forms of the disease. The food, however, should be bland, easily digested, and, if necessary, pre-digested, and given at stated intervals. Beef solution is sometimes well borne, butter milk will be found well borne in many of these cases, sweet milk I find does not agree with most cases of this character, unless peptonized.

The stomach is so very irritable in some cases that the smallest amount of food is not well borne. In such cases lavage may be practiced every morning with mildly alkaline water, after which beef juice may be given, also rectal feeding may be supplemented. Ill effects rarely follow careful use of stomach tube in these cases. Some cases will do well on milk diet from the outset. I think these cases should be fed three or four ounces every two or three hours. Egg albumen is well borne in most cases. At the end of a month if the condition has improved the patient may be allowed scraped beef. Medicinal remedies seem to be of little avail in these cases, and the remedies employed probably do not benefit the ulcer directly, but the gastric catarrh and general symptoms.

Sulp. sod. 50 parts, Chlor. sod. 3 parts, Bi. carb. sod. 6 parts. A teaspoonful each morn-

ing is highly recommended by some. Bismuth in 30 to 60 grain doses, given three times daily is also recommended by some. I believe it does harm, instead of good. Small doses of nitrate of silver may be given, and I believe is of value, may be given in solution or pill form.

If pain is severe give opium, and when it is necessary to give it at all give in one-fourth to one-half grain doses hypodermically. If hemorrhage occurs give opium immediately hypodermically, absolute rest, give nothing by mouth except ice.

Hemorrhage may result fatally, but such is not usually the case. Patient usually recovers rapidly from hemorrhage, and requires iron in full doses.

With our present knowledge of the subject it is hard to determine the limits of medical and surgical practice in these cases. The simple non-indurated ulcer in the majority of cases is a medical one, while chronic indurated form is best treated surgically. Surgical interference is indicated (first) for perforation, (second) chronic indurated ulcer, experience has shown that in these cases the ulcer heals rapidly after gastro-enterostomy, (third) where severe recurring hemorrhage occurs (fourth) in chronic cases where medicinal treatment has failed to give relief. From a medical standpoint I think these cases are best treated by rest, proper feeding, either rectal or by mouth, careful stomach washing, and Ag. No. 3.

SOME SURGICAL DISEASES OF THE STOMACH—A PLEA FOR THEIR EARLY RECOGNITION.*

By Edward E. Reisman, M.D.,
Chattanooga.

It has been my fortune or misfortune to have come upon a rather unusual number of "stomach cases," that is, an unusual number for one who is not doing special work in this field, so I might say this subject was rather forced upon me. These cases have proven of more than passing interest and because of this I have selected this subject.

When one speaks of surgical diseases of the stomach there comes to mind, first, the most common conditions, namely, ulcer and cancer and then that vague, indefinite condition variously diagnosed as chronic indigestion, dyspepsia, nervous dyspepsia and stomach trouble.

It appears rather remarkable to me how long these stomach sufferers are permitted to pursue the even tenor of their way, interrupted only occasionally by a few half-hearted attempts at gastric lavage or the administration of stomachic bitters.

The great fault, and it is just as well to confess it, seems to be that we do not approach diseases of the stomach correctly. We do not go into the case carefully enough, we do not employ the precise methods of diagnosis as in other ailments; we do not pursue the same line of searching inquiry and we neglect, most important of all, a thorough physical examination of the patient. Too many of these cases are permitted to come back to us again and again until by reason of seeing the same faces so often and hearing the same complaint our patience becomes sorely tried and rather than go into the case thoroughly and well, we cover our ignorance and ease our conscience by putting them into that indefinite class of sufferers, the "gastric neurotics."

There is a large class of cases, perhaps fifty per cent, that consult the physician who are undoubtedly neurotics, but they show all of the symptoms peculiar to their condition, such as visceral ptoses, gastropnoia, cold hands and feet, mal-nutrition and obstinate constipation. They certainly have no gastric disease, the stomach itself does not require treatment and I only mention them to eliminate them.

Such cases cannot be cured by medical or surgical means and to attempt to cure them by these means only means failure and the bringing of discredit upon ourselves.

Having eliminated the neurotics we find that stomach analyses are of considerable value in arriving at a diagnosis, but stomach analyses are very misleading without an accurate and complete history and careful

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physical examination. So much stress is laid by most diagnosticians upon the presence or absence of hydrochloric acid in the stomach contents, and I think too much so when you stop to consider that we find hyperchlorhydria in stomach neurosis, chronic appendicitis and gall stone diseases, the latter often causing stomach symptoms due to pyloric spasm.

It is a fact that in seventy-five per cent of the cases that come to the operating table, the patients do not show the high acids so commonly thought to be the case. Young subjects with developing ulcers show higher acid tests, but in the larger class of cases those in middle life with ulcers of several years standing the age and chronicity tend to reduce the acidity.

Blood if present in large or small amounts in the vomitus in the test meal or occult in the stools taken in conjunction with the pain and vomiting make a diagnosis of ulcer reasonably certain.

The presence or absence of residual food is of more value taken along with the size of the stomach. This can be determined very simply and easily with an ordinary stomach tube and a Davidson bulb syringe. The stomach is inflated until the patient complains of the tenseness, which they will usually do before the stomach is fully distended, and you can then easily outline the entire organ by means of percussion and palpation as well as note tumors or constrictions.

This method I believe is the simplest of any and when you have finished your examination the air is easily expelled by direct pressure over the stomach, the tube being withdrawn the patient is none the worse for the experience.

Another advantage of this method is that you have absolute control over the amount of distension which you cannot have with any other method.

The histories cover years of complaint and that for a good part of the time they alternate with periods of suffering and periods of freedom from pain. They tell you that at first the taking of food relieved them, but as the condition progressed the attacks became worse and lasted longer; the appetite failed or they could not eat because of pain, distress, gas formation, vomiting and sour eruc-

tations following. During these early attacks this precise relief of symptoms by the taking of food and drink and the regular return one to four hours later is typically characteristic.

Pain is a very reliable symptom. Its appearance at a regular time after eating is quite typical and very suggestive of ulcer. Those ulcers situated close to the cardiac end would cause the pain to appear earlier after taking food than would those situated nearer the middle of the stomach or the pyloric end.

The characteristic point about this pain is the regularity with which it appears and the equally ready relief from this pain by taking food or by vomiting.

This persistent regularity, meal after meal and day after day during the attacks is hardly equalled by the symptoms of any disease that I can call to mind. Later when complications have ensued we find that the taking of foods tends to increase the pain which is often more nearly continuous.

In two cases that I had, the patient after commenting upon the regularity of the pain after eating, stated that for the last few months the pain had been particularly continuous, and that they had experienced no time when there was real relief from pain. These two cases of operation showed dense adhesions and the pain must have been synchronous with the formation of the adhesions.

Vomiting in the latter cases occurs less often, but is more copious; appetite and nutrition fail and the patient loses strength and flesh rapidly. The early regular and characteristic history is the key to the diagnosis when we are confronted with the complicated stage of ulcer development.

Cancer of the stomach occurs in the proportion of about one to three as compared with cancer in the other parts of the human body, or to put it the other way around, one-third of all the cancers of the human body occur in the stomach.

I believe it is pretty generally conceded that cancer of the stomach is more frequent than in any other site of the body and at the same time operations on the stomach for its removal are comparatively rare as compared with cancer of the uterus, kidney, etc.

Certainly the chances for recovery are equally as good and I believe we are to be blamed for not investigating these cases carefully enough.

Let a woman consult any one of us with a statement that she has passed the menopause and has been noticing, what she would term, a few spots of blood upon her clothing, that woman would be examined immediately for a possible erosion of the cervix or beginning cancer—so strong an impression has that statement made upon us that we would in all probability take a section from that cervix and send it to a pathologist for an examination, even though his report be negative as to cancer our prognosis to the patient will be most guarded. Compare that proceeding with what is done following a history of chronic ulcer, unless the case falls into the hands of a surgeon, exploratory laparotomy is rarely advised and when the case has been progressed far enough so that a diagnosis of cancer of the stomach is unavoidable, the patient who is incurable receives the diagnosis with Oriental-like resignation. Who is to blame for this condition? Undoubtedly we are. I do not mean to say that cancer of the stomach is as easily diagnosed as cancer of the cervix, but at the same time we have some very positive signs which should make us at least suspicious.

Quoting a very popular phrase, "Ulcer is a great soil upon which cancer is engrafted." Statistics from the clinic of Doctors Mayo, compiled by Graham and Guthrie, show that seventy-one per cent of all cases of cancer of the stomach develop upon an old ulcer case and give a long preceding typical ulcer history. When ulcer is latent cancer sometimes develops and no sign be given until such wide destruction and infection are present that surgery is worse than useless. Fortunately those cases are rare.

Pain, a common symptom in cancer, is not so reliable though as in ulcer. When noticed it is epigastric, rarely acute, but more of a dull, sickening type. It is not closely related to taking food, though modified by it. The localization of pain in cancer is not very de-

pendable nor is tenderness of much diagnostic help. Poor appetite is as a rule quite common, therefore nutrition fails early. Vomiting is usually a prominent symptom and increases as the disease progresses, compared to ulcer it is more irregular and more frequently foul and obnoxious. Blood, bright or coffee-ground in character, is frequently found in the vomitus. Gas is usually more common in cancer than in ulcer, and the belched gas in cancer has a foul, offensive odor, and the breath is bad in contrast to the bland or sour breath of ulcer. The test meal has its indications, lessened Hcl., increased blood and food remnants more pronounced, but should always be taken as an adjunct to a careful clinical history.

The all-important point in cancer of the stomach is early diagnosis. A case that has gone so long that cancer of the stomach can be diagnosed positively, is a disgrace to the attending physician. With positive diagnostic evidence so difficult to obtain we must concede that exploratory abdominal section is certainly justifiable and it is astonishing how frequently patients will agree to this when explained to them.

In conclusion I desire to emphasize this fact: That in this condition as well as in all other intra-abdominal conditions, such, for example, as appendicitis, extra uterine pregnancy, gall bladder disease, etc., the diagnosis has been perfected only as a result of the operation. When we first began to do operation for each and every one of these conditions the views which we held were extremely vague. We have reached a reasonable degree of certainty in our diagnosis, only by reason of the fact that whatever diagnosis was made proved correct or incorrect by surgical operation. Therefore it behooves us, as physicians, to make the diagnosis of this fearful malady with greater promptness and accuracy. To accomplish this, it is of great importance that we should not be backward about advising exploratory incisions and that in all operable cases both the surgeon and the internist should in every instance be present at the operation and should deter-

mine whether the ideas formed concerning the condition are correct or incorrect. For upon our skill in diagnosing these cases early and accurately will depend our ability to restore to health and happiness a large and increasing army of stomach sufferers.

DISCUSSION.

DR. JOHN A. WITHERSPOON, Nashville: I have been very much interested in this paper, and I am frank to say after having devoted the last ten or fifteen years of my life very largely to stomach troubles, I have not yet arrived at that time or place where I can diagnose cancer in the surgical period. To differentiate cancer of the pylorus or stomach early enough for surgical intervention, as the speaker has very well stated, is a very difficult problem. A man does not have to make many stomach content tests before he learns they are thoroughly unreliable. You will find a few cases here and there with typical earmarks and they are valuable, but the last four cases of cancer I have seen of the stomach had free hydrochloric acid, one of them having four and a half per cent of hydrochloric acid in the stomach contents by test. We used to feel that cancer had an absence of hydrochloric acid in the presence of lactic acid and the Oppler-Boas bacillus.

One of the most valuable points to which I want to add just a thought or two is the history of the case. The man who takes the most pains in studying a true history of his case and the fact of the preceding ulcer being so common is a very valuable point in your diagnosis. I have long since added to that in my own mind the retention of food. One of the most valuable points in my judgment is to give some well known food and simply wait and see whether or not that food stays in the stomach, or whether it has passed out of the pylorus in the normal length of time. Pain is thoroughly deceptive. We all know that. I have had several cases of cancer almost to the point of obstruction of the pylorus with little or no pain. Vomiting is valuable, it is true, but it is not present early enough to determine it in many cases. So I think the conclusions of the essayist possibly are the best, and that is wherever you have had a history of ulcer or a history of prolonged gastric disturbance, and for

any reason that patient commences to have retention of food longer than the normal, it is time to suspect cancer, especially if that patient has passed middle life, and I believe then an exploratory incision is the only hope of the case. After a tumor has been felt, after the loss of flesh and weight have been noticed, after cachexia and various other symptoms, your diagnosis is non-surgical and your operations perfectly futile. I am aware of the fact that reports have been made of cases of resecting three-fifths of the stomach and saving the lives of patients with well developed tumors in the stomach of a cancerous nature. I happened to be one of the unfortunate individuals who have had a good many operations done on patients for cancer of the stomach, and I have yet to see one where a tumor was present and was possible, and where the well developed symptoms of cancer were unmistakable, that surgery accomplished practically anything except temporary comfort. They do not get well. They usually are hastened on to a fatal termination. Therefore, I believe the only safe thing for us to do is to try and make a diagnosis of the true condition that exists, and while the use of the stomach contents is valuable, I should say beware of expecting too much of tests of the stomach contents. Use your food and retention methods that are valuable; watch the peristaltic action of the stomach and by exclusion, if you please, try to exclude ulcer and gallstones or gall-bladder infections, and do not wait too long. My judgment is we had better make an exploratory operation than to let the case go too far for operative procedure. I know no means, and I repeat it, practical, scientific means by which an early diagnosis of the majority of cancers of the pylorus can be made.

DR. REISMAN (closing): I am glad to hear a man of such wide experience and known ability agree with me along the lines indicated in my paper, because I felt somewhat timid in advancing the theory that these cases should be explored. Of course, there are some practitioners who will criticise that proceeding, but I feel like Dr. Witherspoon does, we have no known scientific means of determining this condition accurately except by early incision.

Again, I want to emphasize the important point that early diagnosis is the only way we have of ever affording a cure for these patients.

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EDITORIALS**CONSERVATION EXPOSITION.**

During the National Conservation Exposition, which is to be held in Knoxville, Tennessee, during the months of September and October, 1913, the Health Department and a Child Welfare Department will be well represented.

The directors of the exposition, realizing that conservation and preservation of health is the most important and primary of all conservation, have set aside most liberal and spacious quarters for these two departments and appropriated large sums of money for their maintenance. The Health Department will be under the charge of the Health Committee composed of Knoxville physicians who have associated with them Mr. Gardner T. Swarts, Jr., of Providence, Rhode Island, who is an authority on public health, a manufacturer of health exhibit devices and an expert of classification and arrangement of public health exhibits.

The Public Health Department will consist of the following exhibits: Milk, water, communicable diseases, urban and rural sanitation. Dr. Olin West, Dr. Lucius Brown and Dr. W. E. Hibbett have very kindly given their co-operation and will make exhibits of their special lines.

Miss Julia C. Lathrop, head of the Federal Children's Bureau in Washington, is the Chairman of the Child Welfare Department. The committee is composed of men and women who are leaders in social work throughout the South. Miss Emily Coye is acting as Secretary of the Child Welfare exhibit. The material itself has been secured from the National Child Labor Committee, other national societies and the Russell Sage Foundation represented by Miss Helen C.

Babbitt, an authority on infant welfare, and has been arranged and put into exhibit form by the National Child Labor Welfare Exhibit Committee.

Doctor, you are invited to the exposition and urged to go and take with you those interested in public health, Secretaries of Boards of Health and those engaged in public health and welfare work. This exhibit is the first of its kind to be held anywhere in the South and should demand the attention of every person interested in health and public welfare.

The doctors of Knoxville will be more than glad to see you in Knoxville and do what they can to add to your visit to the Exposition and to feel that you will be more than paid by seeing our excellent exhibit.

T. R. JONES, Chairman.

THE INCREASE OF SYPHILIS.

Is syphilis actually increasing? The question is a most difficult one and the correct answer will probably never be known until the physician is compelled to report such cases as he does other infectious diseases. Reliable statistical knowledge of the distribution of syphilis is lacking and various observers in different cities and different countries vary their estimates from four to sixteen per cent of the population. The enormous increase in the literature of recent years bearing upon this disease, would lead one to believe syphilis of more frequent occurrence than formerly and some authors openly claim that it is on the increase and offer changed social conditions as a reason. No one can doubt that morally there is a marked tendency towards degeneration and since syphilis is a disease transmitted almost entirely by human intercourse, with women from the poorest classes driven to prostitution by the high cost of living, it seems reasonable to infer a natural increase over the past half century. But we should not lose sight of the time during the fourteenth century when this disease was in almost every home and should be encouraged by the fact that we are more fortunate than our ancestors, in that we know the cause and are able to combat it more successfully.

Norway, Sweden and Denmark are the only

countries at the present time requiring notification on the part of the physician of sexual diseases, but the nature of the disease is not required, consequently statistics are of no value as they relate to syphilis. Judging from the increase of prostitution, caused by the demands of the times, which withhold men from entering the marital state or whatever other causes may be operative, we are inclined to believe that syphilis is more prevalent than any time during the past twenty-five years.

THE NASHVILLE HEALTH DEPARTMENT.

During the recent campaign for Mayor in the City of Nashville, one of the candidates was bitter in his denunciation of the present administration for an apparent increase in expenditures, and pointed particularly to the Health Department, in which comparison in expense between 1908 and 1913 were shown.

We do not deem it necessary to defend the Health Department of Nashville from any form of criticism from such a source—their work stands out prominently and speaks for itself—but the criticism suggests to us the necessity for further education of the public as to what the present Board of Health are actually doing with the paltry appropriation they are now receiving and showing them the necessity for an increase from year to year in order that this, the most important department of the city government, may be brought up to its fullest efficiency and be enabled to accomplish still more.

In 1908 the department limited its activities (we are ashamed to say how limited they were) because the financial support given was only commensurate with a limited effort. The employment of a health officer, a few sanitary inspectors, and running a useless and extravagant prescription department on a \$15,000 appropriation was about all that was done. The present department has extended its work into various lines and its effort in behalf of a reduction in infant mortality has already made itself felt on the annual toll of death which was formerly paid by these unfortunate children.

The tuberculosis bureau, now caring for more than 200 patients daily; the bacteriolog-

ical and chemical laboratories, which have supervision over the milk and water supply, making all necessary tests for tuberculosis, meningitis and other contagious or infectious diseases; furnishing free all vaccines and sera needed, besides such pathological work as is done in any modern laboratory, this department alone making over 12,000 examinations during the year. The numerous inspectors, especially the milk and meat inspectors, the increased necessity for more fumigation, the maintenance of four milk stations with their efficient corps of nurses and physicians are doing a work for the people of Nashville which cannot be counted in dollars and cents, and a candidate is bold, indeed, who would offer to criticize so valuable an asset to a great and growing city. The wonder to us is that so much has been accomplished with so small an appropriation.

If there had been profligate waste of the people's money, he would be right in calling their attention to it, but he failed to take into consideration the difference between a department wide awake and one that had been sleeping for, lo, these many years. Many congratulations to the Nashville Health Department, and especially to their efficient Health Officer, and here's hoping their appropriation may be doubled in the next three years.

News Notes and Comment

Dr. A. A. Bradley, formerly of Sparta, has located at Slagle's Store, nine miles north of Sparta.

Dr. W. J. Breeding, of Ravenscroft, is making preparations to build a handsome residence on his big farm ten miles beyond Sparta.

Dr. A. B. Cooke, of Nashville, left August 23, for Los Angeles, Cal., where he will spend the winter.

Dr. Olin West, of Nashville, delivered the annual oration at the public session of the Kentucky State Medical Association on Tuesday evening, September 2. It is need-

less to say that Dr. West carried off the honors and made those in attendance feel the importance of the good work he is doing.

Dr. E. T. Newell, of Chattanooga, recently lost his brother, who died after an attack of typhoid fever.

Dr. W. D. Haggard, of Nashville, is spending some time at Harvard University. He will return in September.

Dr. W. Frank Glenn and son, Ivo, of Nashville, left August 12 for Summerhaven, Fla., where they will visit friends.

Dr. Charles S. and Samuel S. Briggs announce the beginning of the twenty-third session of their surgical infirmary.

H. P. Smith, son of Dr. R. E. Lee Smith, of Doyle, has returned home after an absence of four years in the United States Navy.

Dr. Deering J. Roberts, of Nashville, is confined to his bed with an attack of erysipelas contracted during a vacation in Kentucky.

We are pleased to report that the two children of Dr. O. Dulaney, of Dyersburg, who have been seriously ill with scarlet fever, have fully recovered.

Dr. Jas. E. Green, of Chattanooga, announces the removal of his office to the corner of Market and Main Streets, over Stong Bros.'s drug store.

Dr. S. H. Long has opened offices on the second floor of the Van Deman Building, Chattanooga, limiting his practice to the eye, ear, nose and throat.

Dr. James H. Atlee, of Chattanooga, is spending the summer at Harvard and will visit the leading hospitals in Boston, returning home sometime in September.

Dr. W. B. Cantrell, of Cassville, has returned from Seven Springs, where he has been for his health for the past three months. We are glad to report the doctor's health

much improved and that he is able to return to work.

Dr. and Mrs. Hazle Padgett, of Nashville, have returned home after a month's visit to Virginia Beach.

Dr. H. M. Cass, formerly of Morristown, has located in Johnson City, where he will continue to practice medicine. We wish the doctor much success in his new location.

Dr. G. Victor Williams, Secretary of Hamilton County Medical Society, has announced the removal of his offices to 202-203 Van Deman Building, located on corner of Eighth and Market Streets, Chattanooga.

Dr. Scott Farmer, of Cookeville, left August 10 in company with his son for New York, Washington, Boston and other cities. While away the doctor will combine pleasure with work and will visit the larger hospitals.

A new hospital with forty-six beds will be ready for operation by January 1, 1914, at Dyersburg, Tennessee. The hospital will be owned by Drs. Willis Young, of St. Louis, Mo.; E. L. Wilkins, of Batesville, Miss., and O. Dulaney, of Dyersburg. In connection with the hospital a training school for nurses will be operated under the direction of Dr. N. S. Walker, of Dyersburg, who will be chief of the staff.

MARRIAGES.

The marriage of Dr. Randall E. Wyatt, of Nashville, to Miss Mattie Reece Wells, took place at the home of the bride's sister, August 20.

Dr. J. T. Griffin, of Tiptonville, was married to Miss Irene Hopper, of Nashville, August 2.

DEATHS.

Dr. S. T. Davidson, of Nashville, died August 29th at his home, at the age of 81 years.

Mrs. Warren Gill, daughter of Dr. C. N. Cowden, of Nashville, died August 15, at the

home of her parents after an illness of three weeks. Mrs. Gill was twenty-five years of age.

County Society Proceedings

DAVIDSON COUNTY.

July 29.—The meeting was called to order by the President, Dr. Olin West, at 8:10 P. M., with the following present: Drs. Witt, Litterer, Hill, Savage, Bloomstein, Doak, Duncan Eve, Sr., Glasgow, Ward, Harris, Overton, Edwards, J. Witherspoon, Pickens, Sayers, Sharp, Duncan Eve, Jr., Morrissey, Oliver, McCabe, Hibbett, R. Caldwell, L. Caldwell, Nichol, Cayce, W. A. Bryan, C. F. Anderson, W. B. Anderson, Dixon, Shoulders, E. A. Barr, Fort, Sanders, Billington, Tigert and visitors.

The minutes of the two previous meetings were read and approved.

The essay of the evening was by Dr. W. H. Witt, his subject being the "Management of Pleurisy with Effusion."

Dr. C. E. Brush, who was scheduled to open the discussion, was absent. Dr. Robert Caldwell opened, emphasizing a point brought out by the essayist, saying that one should not be too hasty in aspirating the fluid, and that in his experience if aspiration is delayed there is usually no necessity for aspirating again; whereas, on the other hand, if aspiration is practiced early, the operation must be repeated.

Dr. Bloomstein stated that he was interested in the diagnosis of this condition in children. He said the average practitioner waits for definite physical signs in children such as absence of breath sounds, etc., whereas pleurisy with effusion in children often gives the physical signs of pneumonia. He believes that a needle should be introduced into the pleural cavity when there is any doubt. In regard to the treatment, Dr. Bloomstein believes that unless there are urgent symptoms he allows the fluid to be resorbed, though he knows that there are authorities having opinions to the contrary. Sir Rose Bradford was quoted as advocating the immediate removal of the pleuritic fluid, though it is perhaps best to wait until the acute stage of the disease has passed.

Dr. Glasgow referred to some one advocating the withdrawal of fluid and injecting some of the fluid under the skin. This is said to cause the fluid in the chest to be resorbed.

Dr. Litterer said that theoretically the early withdrawal of the pleuritic fluid is better since the opsonic index of the fluid first effused is low. By withdrawing this the new fluid thrown out has a higher opsonic index and is therefore more beneficial. Dr. Litterer also spoke of the difficulty in demonstrating the tubercle bacilli in pleuritic fluids which are known to be tubercular.

Dr. Hill spoke of the difficulty he had had in getting fluid in a case he had seen. This was pus, however. Dr. Hill reported a death a few hours after removing a part of a serious effusion in the chest. He couldn't say whether the removal of the fluid was the cause of death or not.

Dr. Witt, in closing, stated that when to aspirate is not as important as the diagnosis. He said that puerisies are often present without localizing symptoms. As to the time of removal of the fluid he is guided more by the quantity of fluid present and other features referred to in the paper than by the febrile condition.

Dr. Savage reported a girl of six years seen by him in consultation in a neighboring town by mistake. He made a diagnosis, although this case was out of the realms of his specialty of poliomyelitis; which diagnosis was concurred in by most of the members of the Academy from the graphical description detailed by Dr. Savage. The patient was recovering when last heard from.

The Academy adjourned at 9:25 P. M.

August 5.—The regular meeting of the Academy was called to order at 8:15 P. M. by Dr. George Price, the President and Vice-President being absent. Among those present were: Duncan Eve, Sr., Litterer, Fort, Harbin, Fuqua, H. Barr, Cayce, Billington, Pickens, Thach, L. Caldwell, R. Caldwell, Dixon, Pollard, J. Witherspoon, Hill, Morrissey, Edwards, O. Bryan, Jones, C. F. Anderson, Sanders, Hibbett, D. Eve, Jr., Oughterson and visitors.

Dr. Gallagher, as Treasurer of a committee

to solicit funds for the entertainment of the Tennessee State Medical Association which met in Nashville last April, reported that \$713.75 had been collected from eighty-three men in amounts ranging from \$1.00 to \$25.00; that \$115.00 had been collected from exhibitors; that \$552.07 had been expended for the Association's entertainment and that \$276.68 was deposited to his credit as Treasurer in the Cumberland Valley National Bank. Dr. Duncan Eve moved that this money be placed to the credit of the Academy. Lost. Dr. C. F. Anderson moved, seconded by Dr. Robert Caldwell, that this money be prorated back to the original contributors. Carried. The minutes of the previous meeting were read and approved.

Dr. Paul DeWitt, the essayist of the evening, not having arrived, case reports were called for and Dr. Duncan Eve, Sr., reported further on the double fracture of the femur in infant, stating that complete union had resulted, the skiagram showing the union to be satisfactory, though one limb is slightly shorter than the other. Dr. Eve was not prepared to report the ultimate result of this fracture, but believes that this modification of Bryant's apparatus which he used to be very satisfactory.

Dr. O. N. Bryan raised the point of the prevalence of para-typhoid fever in Nashville, stating that he had seen six cases, one of which gave an agglutination test to both the para-A and para-B types.

Dr. Jones said he had done 150 Widal's this season in the City Laboratory, and of the positive tests there were almost as many para-A as the straight typhoid. He reported two cases of para-typhoid resulting in death.

Dr. Litterer said that the occurrence of para-typhoid is increasing, there being more in Nashville than he had ever seen before. The percentage of para-typhoid to straight typhoid ran about 5 per cent for the city and 12 per cent for the country districts, but these figures are getting larger, especially the para-A type. Dr. Litterer stated that the percentage of para to straight typhoid in New Orleans was 20 per cent, Baltimore 5 per cent, Austin, Tex., 5-7 per cent, Mobile and Jacksonville 2-10 per cent. The speaker stated that

he had seen two cases of para-typhoid at autopsy and that the lesions were very much like those of straight typhoid. He stated further that he had seen only four published autopsies of this disease.

Dr. Pollard reported the following cases: "This case is reported for one reason only, and that is the absence of cough in an empyema, probably secondary to a pneumonia. The patient was a female of seven years, who was taken ill ten or twelve hours previous to time seen. At the time of my visit she was complaining of pain in the abdomen, confined chiefly to the right side. The onset of the pain was not accompanied by a chill. The temperature ranged from 101 to 105 F., respiration 24 to 36, pulse 100 to 130. The pain in the abdomen was associated with tenderness and rigidity. She was nauseated at intervals. Bowels sluggish. At the time seen by me she looked septic, emaciated and anemic and sallow. The abdomen was well distended, rigid and tender; her respiration was 30, pulse 130, temperature 104 F. There was tenderness over the liver, the lower margin of which was three or four inches below the costal margin. Her trouble was apparently abdominal, but on examination of the chest signs were found leading to chest involvement, viz.: diminished expansion of the right side, flatness extending over half of the same side, breath sounds distant and bronchial. A needle was introduced and pus demonstrated. The attending physician denied the presence of cough at any time and there was certainly no cough when seen by me."

At this juncture Dr. DeWitt arrived and read his paper on "The Open Treatment of Fracture—A Few Remarks."

Dr. Robert Caldwell, in opening the discussion, said that this subject had been thoroughly threshed out and that those who have considered the matter have their minds fixed. He believes that the question which concerns us is: what will be the results of the operative treatment in the hands of the average surgeon and not what are the results in the hands of Mr. Lane. Personally, Dr. Caldwell leans toward the operative method, for he believes a larger per cent of fractures will result satisfactorily by the operative treat-

ment. He said if sepsis could be eliminated, as Mr. Lane does, he believes more surgeons will approve of the operative method.

Dr. Billington said that he had seen a number of patients operated upon by our best surgeons only to be followed by infection and sinus formation, necessitating the removal of the plate. He thinks the presence of the plate acting as a foreign body tends to favor infection and believes that there is too much stress laid on the danger of bone to infection.

Dr. Duncan Eve, Sr., after commending the conservatism of the essayist stated there is an increasing demand for operative treatment of fractures of the long bones, but what is wanted is end results, and this is often obtained by conservative methods though the latter may take more time. The open operation is becoming more popular because it is more of an operation and because of the X-Ray. The latter shows overlapping and deformity and is a great danger, especially before union when the patient has not satisfactory functional results. Bartlett, of St. Louis, has said that union occurs whether infection is present or not, so long as the infection is not systemic. Dr. Eve here reported a case of compound fracture of the tibia plated and followed by a violent local infection. The plate was removed and union is taking place. The speaker thinks that the idea of infection militating against union a bugaboo and that all surgeons have infection at times; Mr. Lane himself has been sued on account of infection. Dr. Estes, of St. Bethlehem, Pa., who does probably more fractures than any other American surgeon, says the prevention of infection is a myth.

Dr. Duncan Eve, Jr., stated that the literature bearing on this subject during the past six months has been rather adverse to the operative treatment. He took exception to the statement of the essayist that one-fourth of the cases of fractured femur should be operated upon, saying that these cases could be managed very satisfactorily with the Hodgen's splint. Dr. Eve reported having a double compound fracture of femurs up at present in the Hodgen apparatus. He reported another case and exhibited skiagram of fractured femur just below the lesser trochanter in a child of eight years, whom he was treat-

ing in a Hodgen's splint, and remarked that if this fracture should not be operated upon none should.

Dr. DeWitt in closing said he didn't believe if the operation is absolutely aseptic there will be any infection. He stated that he was quoting Estes when he said that 25 per cent of fractures of the femur should be operated.

Adjourned at 9:35 P. M.

August 12.—The regular meeting of the Academy was called to order by the President, Dr. Olin West, the following being present: Savage, Davis, DeWitt, Floyd, McCabe, C. F. Anderson, Thach, Simons, Hargis, Sayers, Jack Witherspoon, Sanders, L. Caldwell, Mitchell, H. Barr, Sullivan, Aycock, Shoulders, Litterer, Harrington, Hatcher, Nichol, Enqua, R. A. Barr, Dixon, Oughterson, Cowden, Fort, Pollard, Billington, O. N. Bryan, Jones, Dixon, Hibbett and visitors.

The following applicants were duly elected to membership: Drs. Burnett, Wilfred Wright, A. Stuart Brown, Elam F. Srygley, George A. Crafton, T. D. McKinney, David B. Zbinden, L. B. Snapps, Joseph Russell Tarpley, William K. Kennon, J. Howard King.

There being no available essay for the evening, a series of case reports were arranged for, Dr. E. M. Sanders reporting the following: "An Italian construction engineer, 24 years old, fell from his engine, a distance of six feet, striking his right loin just above the crest of the ilium. The fall made him quite sick and he was unable to get to his feet for fifteen or twenty minutes, and later walked about a hundred yards and went to bed. He was seen by his physician within three hours, with normal temperature and pulse, no vomiting, but nauseated. His bowels had not moved and he had not voided. His physician did not believe him seriously injured and gave him some general directions, instructing him to stay in bed and eat lightly. At the doctor's call the following day the patient's temperature and pulse was still normal, but nausea had increased and he had vomited once or twice. His urine was examined at this time and found normal. On the third day his physician found his temperature 102½, pulse 110, nausea and vomiting increased. On the fourth day the tem-

perature went to $103\frac{1}{2}$, he was quite nauseated, vomited everything he put in his stomach, and although his bowels had moved well from the dose of salts given him on the third day, he had a little distention of the abdomen. On the fifth day he was better, his temperature had dropped to 100, his pulse to 90, but he was more tender in the back where he had received the blow than he had been at any time. His distention had gone down somewhat and he had no anterior localized tenderness. On the sixth day he was about the same, except his nausea and vomiting were quite severe. He remained slightly distended. His bowels moved, however, but the local tenderness in his loin was more marked. He had practically the same condition on the seventh and eighth days, and on the morning of the ninth day his condition was generally worse.

I was asked to see the patient on the afternoon of the ninth day of his illness and found him lying on his back with both knees drawn up, with anxious expression, vomiting all the water he took, but said he was quite hungry. His pulse was 120, but regular and full. Abdominal examination showed a moderately distended abdomen with some general rigidity, but more marked on the right side. No dullness and no mass could be made out. Examination of the right loin and back disclosed nothing, except tenderness on deep pressure. Rectal examination was negative. He was brought to the hospital at once. The urine was normal. Leucocytes 15,000 with about 85 pulse. He was given an enema and a mass sought for per rectum, but not found. Widal was negative.

We felt with these facts before us that this man probably had appendicitis and operated upon him through a McBurney incision. No fluid was found in the abdomen and everything looked normal until we reached the base of the appendix, which was slightly inflamed. The appendix seemed to turn upward and outward from its base and only about three-fourths of an inch of it could be seen or felt, the rest being retro-cecal. The peritoneum was eut, a cuff turned back and an attempt made to draw the appendix from its bed. It was loosened up carefully and after some time gave way from its attach-

ment and came out in the abdominal cavity and was removed. It was then found to be six inches long and terminal two inches gangrenous and perforated in several places. Foul smelling pus followed the appendix out of this cavity and continued to well up until about two inches had come away. We had previously packed off all of the adjacent structures and at this time we sponged the pus away as fast as it came until it ceased to flow. Then a rubber tube was introduced into the hole for about three or four inches. This tube was surrounded by rubber tissue and then by iodoform gauze and the packs removed.

He was put to bed with temperature of 101 and pulse 160. He was given $\frac{1}{4}$ gr. morphine every four hours, and although he vomited some during the first twenty-four hours, he took large quantities of water and retained it. The next day after the operation his pulse was 120 to 130, and his temperature 101 to 102. On the third day his pulse went to 140, but he had no abdominal distention, drank liquids freely, voided, and said he felt well. On the fourth day he appeared to be out of danger and was given all the liquids he wanted. He passed gas freely, and the wound was in good condition. He had drained but little since the operation and although I removed the tube and reinserted it, but little pus came from the abscess cavity. On the fifth day his pulse became rapid, but his temperature remained normal, his abdomen was distended and he was put on a Murphy drip and hot stupes to the abdomen. He began to look as bad as before the operation. He vomited green fluids twice during the day. Urinary examination showed the urine to be normal except for a few red cells.

On the morning of the seventh day his pulse was 120 and his temperature normal, but the abdomen quite distended. His stomach was washed, the contents being brown and offensive. An enema was given, but returned clear. On the morning of the eighth day his temperature was normal and pulse 120. He was enormously distended and his stomach was washed every two or three hours, large quantities of dark brown, offensive material being returned. In the afternoon we gave

him an ounce of salts through the stomach tube and at 11 o'clock that night 5 grs. of calomel. The morphine was left off and the next morning his bowels began to move, he having four up to 3 o'clock in the afternoon, at which time he was given another dose of salts.

That night he appeared to be very much better; his temperature was normal and pulse 96. He had four small bowel movements during the night. His stomach was washed once during the night and the next morning his stomach was soft and almost flat. He had a good day and night, but the next afternoon his distension returned, his pulse began to rise and his respirations went to 60. His lungs were gone over and a few rales could be made out. His temperature at this time was 101 and did not get any higher. By 6 o'clock his pulse was 150 and respiration 60. His distention was enormous, although we washed his stomach often. The enema returned clear. At 8 o'clock the next morning he was pulseless and died at 9:15 A. M.

Post-mortem showed a general peritonitis with many adhesions, especially in the right side and the pelvis.

I report this case because I feel that from a medico-legal standpoint a decision should be reached if possible as to the reality of traumatic appendicitis in general, and especially in this case, inasmuch as this man was insured and I will probably be called on to say whether or not his death was due to the accident.

Dr. Sanders' second case was as follows: "A married woman of 24, rather fleshy, gave a history of recurrent abdominal colic with a severe attack about a year ago, at which time the bowels could not be moved for two weeks. She complained of severe dysmenorrhea since the age of puberty and although she had been married four years, had not become pregnant. Abdominal examination was negative and the pelvic examination revealed a perfectly normal pelvis. She, however, complained of slight tenderness when pressure was made on the right tube and ovary. The blood and urine were normal.

She was sent to the hospital, prepared, dilated, curetted, and had a median line incision. When the abdomen was opened the

gall bladder was first examined and found covered with adhesions. These adhesions were thin and veil-like and were easily removed. No stones could be felt in the bladder or ducts. The appendix was next examined and found to be seven inches long, containing three or four enteroliths and showing evidence of chronic inflammation. It was removed and our attention turned to the pelvis.

The ilium, about eight inches from the ileo-cecal valve, was firmly attached to the right tube and ovary. This attachment was severed by sharp dissection. In taking the intestine loose from the mass, the fimbriated extremity of the tube and part of the ovary were removed, therefore the cut end of the tube was sutured into the fragment of the ovary in order to cover the raw area. On the opposite side the sigmoid was attached to the tube and ovary and was treated very much the same way.

This patient was put to bed in good condition and reacted quietly. As soon as she began to regain consciousness she complained of severe pain in her right chest, which increased as she reacted more fully. She complained of the pain all night and slept very little, and had a constant desire to cough. Her pulse rose from normal to 110 over night and her temperature went to 100½. She looked quite sick in the morning and although she had not vomited, she was nauseated with marked dyspnoea.

She grew rapidly worse and at 2 o'clock in the afternoon, twenty-four hours after operation, her temperature was 104, pulse 130 and respiration 46. Examination of the chest showed the left lung to be practically normal, and coarse, moist rales all over the right lung, most marked in the lower lobe. I felt that this woman was developing pneumonia and asked Dr. Oughterson to see her. He went over her carefully and felt that she had pulmonary embolism. By this time her heart was giving away; her pulse became very irregular and weak, and breathing with great difficulty. At this time we elicited from her family the history of some slight attacks of asthma during the last few years. She was almost unable to cough, but now and then

would get up, with great effort, a small amount of tenacious, yellow phlegm.

She was put on liq. ammonia acetate, digalene and atropine, and counter irritation, but grew rapidly worse and presented a distressing picture through the night and the following day. Her pulse at this time could hardly be felt and was from 140 to 160. Her respirations were from 40 to 60 and her temperature from 103 to 104½. Counter-irritation was kept up and strychnine added the next morning and the atropine left off. She became very restless and on the morning of the second day was given ¼ grain of morphine which gave her three hours' sleep.

From that time up to the present she has improved very slowly and her condition now, on the sixth day, is as follows: The lower lobe of the right lung and probably some of the middle lobe is full of coarse rales, but not consolidated; the left lung is practically clear and the apex of the right is improving; her temperature is 100, pulse 96, and respiration 30; she is getting no medication except digalene every six hours and morphine when indicated; she is taking liquid nourishment; her bowels have moved she is sitting up and appears to be on safe ground. We realize, however, that it is not too late for her to come to a fatal termination. If this is a case of pulmonary embolism, it is the only one we have recognized.

On investigating the subject, I find the following facts: 5 per cent of deaths following operation are due to emboli; 70 of these are pulmonary. From 1 per cent to 2 per cent of operations below the waist line give more or less distinct evidence of embolus (Wilson); 10 per cent cause sudden death.

Dr. Sander's third case: "A man, 51 years old, weight 240 pounds, was seized with sudden abdominal pain. He did not call a doctor and took no special treatment for it, but was in considerable pain all during the day. He had a bad night, but felt a little better through the next day, but became quite sick during the night and vomited three or four times. He called his doctor on the third day, about thirty-six hours after the onset of the pain. The doctor found on examination that the man had a large right serotal hernia of nine years standing. This hernia

could not be reduced and a diagnosis of strangulated hernia made.

I saw the patient at 9 A. M., concurred in the diagnosis and advised operation. He was operated on at 11 A. M. The contents of the hernial sac were a little inflamed, but practically normal. The abdominal cavity was opened and a loop of black small intestines presented itself. This was delivered and before normal intestine came in view about six and one-half feet were taken out. A very angry looking, irregular shaped thrombotic clot was found in the mesentery about four inches from the gut. The gut was resected and an end-to-end anastomosis made. His hernia was repaired and he was put to bed with a pulse of a 100 and temperature of 97.

He was given one-fourth grain of morphine and repeated in four hours, but was awake all night and perfectly rational. His urine showed a slight amount of albumin and a few granular casts after operation. His arteries appeared to be slightly hard, but his kidneys acted fairly well, secreting 12 ozs. the first twenty-four hours. The next day his general condition was fine. He took all the water he wanted and did not vomit. He had no distention or rigidity and his pulse was good, 110, regular and strong.

The third day he had a little more albumin, some blood casts, otherwise he appeared to be doing fine. His pulse was 100, temperature 99.5 and he had no distention or rigidity of the abdomen. On the fourth day his condition remained practically the same. On the fifth day he was nauseated and vomited twice. He was a little delirious and I felt that he was going into uremia, as his urine was loaded with albumin, blood, pus and granular casts. On the morning of the 6th day he had a little distention and was vomiting constantly. His pulse was not good, being irregular, weak and about 120 to 130. His urine was getting worse and he was quite delirious. His condition grew rapidly worse and he died at 11 P. M.

Post-mortem showed beginning gangrene of all of the ilium and jejunum above the cecum, appendix and ascending colon. The intestine, however, was nothing like as bad as the six and one-half feet that had been resected six days before. We found a number

of thromboses scattered all through the mesentery and a very large one near the spinal column at the root of the mesentery.

In discussing Dr. Sander's cases Dr. Simons said pulmonary embolism is a fairly rare condition. He has seen only about a half dozen. Had seen one recently in his office. He saw another case in which a hemorrhoid had been done. Patient got up on the fourth day and dropped dead. Quoted Dr. Wilson as saying that most emboli occur about the second week.

Dr. McCabe, speaking to the point of mesenteric thrombosis, said that while the statistics as given by Dr. Sanders are correct, it is not uncommon to find small thrombi in the mesentery, but had never seen one in which gangrene occurred. Dr. McCabe spoke also in regard to strangulated hernia.

Dr. Oughterson spoke in regard to the diagnosis of pulmonary embolism made in the second case. Said that the opinion was based largely on the indirect evidence.

Dr. Sanders in closing stated that the most interesting point was how to prevent pulmonary embolism, but as yet nothing definite is known as to the prevention or cure. He spoke of Elsberg's operation in reference to the cure, but so far no life had been saved by that procedure.

Dr. R. A. Barr presented the following case: "Mrs. R. White, widow, age 55, weight about 200 pounds, had suffered for some years from an umbilical hernia. The greater part of the hernia had at all times been reducible, but on some occasions with difficulty, and always after reduction there was apparently a mass of omentum left outside the ring. On April 10, 1913, late in the afternoon, she was seized with severe pain in the upper abdomen and the hernia increased rapidly in size. When seen at about 8 P. M. she was suffering intensely, in spite of a hypodermic of morphine, and almost unable to make any statement about her condition. The tumor was as large as a man's head, very tense and tympanitic. Immediate operation was advised and accepted. About 10 P. M. operation was begun. A couple of transverse incisions were made in the skin and fat surrounding the tumor, very much as is done in amputation of the breast. An effort was made to dissect

up to the tumor to the ring before the peritoneum was opened, but the structures in the median line were so thin that inadvertently the upper transverse incision went into the sac. The small intestine immediately herniated from the sac through this opening and it became necessary to open the sac widely to prevent injury to the bowel. This added somewhat to the difficulty of getting up the sac, a job that can be done much more satisfactorily before the sac is opened. The sac proved to contain the entire large intestine to the very lowest point on the sigmoid that could make the reach with, of course, the great omentum and appendix as well as several coils of small intestine. None of the contents was badly damaged by strangulation, but great difficulty was encountered in freeing the omentum and meso-colon from adhesions to the sac. After freeing everything except a portion of the omentum, which was ligated and left attached to the sac, the structures were returned to the abdomen. The sac was amputated and the opening closed by the Mayo method of overlapping the margins of the ring from above downward, without separating the peritoneum from the aponeurosis.

The patient had a very easy convalescence, much to my surprise, and the wound in the fat, which was fully ten inches long, healed without suppuration.

Dr. Barr's second case was as follows: "Mrs. J. White, age 47, married twenty-five years, has had ten children at term and four miscarriages. Has never had any menstrual trouble or any female trouble of any kind. Thirteen years ago had pneumonia. Eight years ago had a very ugly bonefelon on right index finger which was some weeks in healing. At this time she had blood in her stools which was attributed to hemorrhoids. After this she had two children without any complications coming up. In September she fainted suddenly and afterwards passed a large amount of very dark blood from her bowels. In June, 1912, she vomited blood and also had melena. The haematemesis was for only one day, but the melena persisted for some days. In August, 1912, she was operated on for piles and afterwards gained flesh and strength rapidly for a few months, but on March 18, 1913, she fainted once more and

had melena and hematemesis. Patient says she has been quite pale since 1911. Has never had sour stomach, flatulence or discomfort after eating. On one occasion ham and cucumbers upset her, but she gives no history of digestive troubles. She has noticed some tenderness on upper portion of right rectus on examination, but at no other time.

Urine—Straw, 1,015, acid, no albumen, no sugar, no pus, no blood, no casts.

Blood—Hb. 40 per cent, white cells 6060, R. B. C. 2,187,000. Fees showed positive blood.

Abdominal examination showed movable right kidney, some tenderness and rigidity over right upper rectus, spleen not palpable. Patient rather thin, flabby and very pale. Murmur at apex of heart supposed to be haemic.

Diagnosis. Duodenal ulcer. Operation April 21, 1913. Incision through right rectus. Stomach apparently normal. Second portion of duodenum bound up with gall bladder in dense adhesions. Posterior no-loop, suture gastro-jejunostomy. Patient made a very satisfactory recovery and was doing well a month ago when last heard from.

The question of diagnosis in this case must remain in doubt to some extent. The history of entire freedom from digestive symptoms is somewhat unusual, but of course not unique for duodenal ulcer. The operation was not entirely satisfactory, as it was thought best to make no effort to break up adhesions and resect the ulcer if found.

The third case reported by Dr. Barr was "Mrs. C., white, age 32." Father's mother died of tuberculosis. Family history otherwise negative. Married 14 years; four children; two miscarriages. Last abortion three months ago. Has never had any trouble with childbirth. At the time of the last miscarriage the attending physician found the uterus fixed, but for a month after this the patient experienced no inconvenience. Two months ago she had an attack of vomiting and griping pain in the rectum. She was put on hot douches, and two weeks later an abscess ruptured into the vagina. For three days after rupture she was perfectly easy, but she became very constipated, and began having abdominal pains. She was given purgatives

that caused a diarrhoea, and she began noticing contracting coils of intestines in her abdomen. After the diarrhoea was checked she became very constipated again and a lot of gas was formed. This continued until April 21st, when she began to suffer severe pain, vomited constantly and was unable to get her bowels to move, though she took repeated doses of salts. She took calomel and a hypo of morphine on the night of the 21st, and spent a very comfortable night. On the 22nd she took salts, but vomited it and continued to vomit during the day and also had a return of the pain. She was admitted to the infirmary at 8 p. m., April 22nd, with a temperature of 97.2-5 and a pulse of 120. The abdomen was greatly distended and very tense over the ascending and descending colon. On pelvic examination the uterus was absolutely fixed in a mass of exudate of wooden hardness. By the rectum the mass surrounded that organ and narrowed its lumen to the caliber of the index finger. The patient was suffering constant pain with severe paroxysmal exacerbations.

From the history of the case I decided that the chances were against any destructive process and that the obstruction was due to agglutination of the coils of intestine. I also figured that operation would merely be the performance of enterostomy, and I hardly thought the patient's condition justified such a procedure, so I decided to try gastric lavage and morphia.

The stomach was washed out, a few ounces of colored fluid being obtained and morphine gr. $\frac{1}{4}$ was given by hypo. The hypodermic was repeated often enough (twice during the night) to keep the patient comfortable, and the stomach was washed as soon as nausea returned. Lavage was performed three times during the night, only a small amount of green fluid being obtained each time. One pint of plain water was given by the bowel every three hours, but none of this was satisfactorily retained. The patient's pulse went to 130 during the night, without change in character, and the temperature remained subnormal. On the morning of the 23rd, when I had about decided upon the necessity of giving water subcutaneously, her bowels began to move, and in a few hours she was greatly

relieved. She suffered at times for the next few days from violent peristalsis and the peristalsis were plainly in evidence, but she was gradually restored to what appeared a normal condition, though she was put on a full diet for a test. Hot douches were used on the pelvic exudate, but made no impression. The patient refused to consider operation when she was in condition to have one performed, and left the infirmary on May 3rd, free of all symptoms though full of pathology.

Dr. DeWitt said that Dr. Barr had given a very interesting report, especially the case of ventral hernia. He said he was glad that Dr. Barr had used local anaesthesia and was sorry that he could not carry it through.

Dr. Cowden raised the point of general anaesthesia and heart lesions, saying that he did not believe that heart lesions are affected by general anaesthesia.

Dr. McCabe described a case of hernia recently seen which was very similar to the one reported by Dr. Barr.

Dr. Barr, in closing, said that it is not right to say that an anaesthetic could not affect a diseased heart. It will affect a sound heart, and surely may affect a diseased one. Dr. Barr prefers local to general anaesthesia in doing hernias in patients with diseased hearts.

Dr. Savage reported further on his case of poliomyelitis. After detailing the symptoms and course of the case, he read letters from the attending physicians and the child's parents. The treatment given was: urotropin 2 grs. three times a day and atropine 1-150 gr. at intervals to keep the throat free of mucous and to stimulate the respiration. Dr. Savage stated that the child was now well and he did not believe that there would be any permanent paralysis left.

Dr. Kennon referred to the hypodermic use of urotropin, saying that he had not used it hypodermically, but had given it in 30 to 60 grain doses in salt solution in the spinal canal for meningitis. He suggested that this method might be adopted in poliomyelitis.

Dr. W. A. Oughterson reported the following cases:

Case. 1. Mrs. W. C., female, married, white. Aet. 32. Housekeeper. Referred by Dr. E. M. Sanders. Complaint, in her own words: "Has a knot in her side, enlargement of the

abdomen, swelling of the feet and ankles, shortness of breath." First thing noted by patient was pain in the left side of abdomen in the region of the spleen in November, 1912. About Christmas of same year, the abdomen, feet and legs began to swell. At the present time has a good deal of pain in the legs.

Family History: F., M. and Br. died of pneumonia. S. L. & W.

Present Illness: Tonsillitis one year ago. Pneumonia twenty years ago. Has had many attacks of malaria, last attack in 1912.

Personal History: Menstrual history not remarkable. Appetite variable. Digestion variable; has spells of vomiting not accounted for; bowels very irregular. Sleep is broken on account of pain in legs.

Physical Examination: Tall, slender woman, anaemic in appearance. Nails blanched; lips and conjunctiva pale. Cheeks slightly dusky. Slight alveolar pyorrhea. Skin negative. Glands, nervous system and thorax negative. Abdomen swollen with doughy feel. Spleen projecting from beneath the ribs to level of the umbilicus. Liver not felt. Feet and legs moderately swollen. Sight and hearing unimpaired.

April 9, 1913. Blood ex. Red blood cells, 2,600,000. Hb. 35 per cent (Talaquist), white blood cells, 181,000. Stained specimen showed poikilocytes, microblasts and megaloblasts, with neutrophilic, basophilic and eosinophilic myelocytes.

Treatment was instituted the same day, which consisted of ten minims of Benzole t. i. d., and X-ray exposures by Dr. Cowden. On April 14th (five days later) the blood showed: leucocytes 168,000, Hb. 50 per cent. April 24th, leucocytes 77,000. May 2nd, leucocytes 20,000, Hb. 60 per cent. Treatment was discontinued for two weeks. May 31st, leucocytes 86,000, Hb. 70 per cent. At this time the spleen had diminished to about half its original size. The Benzole treatment was resumed. Aug. 4th, leucocytes 29,000, Hb. 75 per cent. Spleen still receding in size. Patient is stronger. There is very little pain in the legs, the swelling of the feet and legs has entirely disappeared and the swelling of the abdomen very much reduced.

The object in reporting this case is to show the results of the Benzole treatment, there be-

ing nothing remarkable about the case from a standpoint of leukemia.

Second case: J. G., male, white, age 68, farmer.

Family History: Father died of "diarrhea," age 59. Mother died of influenza, age 86. Two brothers died of "diarrhea" and one brother died of unknown illness. One sister died at the age of 76 of some chronic trouble of long standing.

Past Illness. Typhoid when a young man. Venereal diseases denied.

Personal Habits: Temperate so far as could be ascertained. When first seen (Sept. 25th, 1911) patient was complaining of soreness and swelling of the abdomen; swelling of the feet and ankles. Four months previous to that time had a cold and tonsilitis with swelling of the glands at the angle of the jaw. The onset was with fever. For the past months has had diarrhea.

Physical Examination: Feeble old man. There is a moderate amount of cachexia, otherwise the skin is not remarkable. Nervous system negative. Anterior and posterior cervical, axillary, inguinal and epitrochlear glands all enlarged to about the size of a robin's egg. Several masses about the size of an orange felt in the abdomen; thought to be glands. Tonsils much enlarged. Spleen felt about four fingers below the costal arch. Some dullness behind the sternum. Lungs not remarkable. Marked movable dullness in the abdominal cavity, thought to be ascites. Feet and legs swollen. Heart, apex in the sixth interspace about $1\frac{1}{2}$ inches out. Systolic murmur at the apex and accentuated pulmonary second sound. Temperature 100 F. Pulse 100.

Blood: Red cells, 3,500,000. Hb. 75 per cent (Talaquist). White cells 228,400, 95 per cent lymphocytes, chiefly of the small variety.

Interesting features of this case are: Acute onset, stimulating tonsilitis; rapid progress; age of patient; fatal termination within six months of onset as near as could be ascertained from the history; the preponderance of small mononuclears in a case running such an acute course.

Third case: Male, single, Aet. 26, white; fireman of stationary engine.

Family History: One brother died of

growth in throat; otherwise not remarkable.

Present Illness: Gonorrhea five years ago. Denies syphilis.

Present Illness: March 30th noticed a pain in the back on stooping only. This pain grew worse, and three or four days later gave up work. One week later his left limb became suddenly paralyzed and he fell to the ground. About this time he thought he had a cold. At times he felt chilly, but no elevation of temperature was recorded. There was no pain, but the soles of his feet and his arms grew numb. There were slight facial paralyses on the same side, lateral nystagmus, internal squint, pupils dilated but reacted to light and the tongue protruded to the right. Cervical and axillary lymphnodes palpable, but not enlarged. Knee jerk absent. Kernig positive, both sides. No Babinsky. Sensation blunted in both legs. Speech thick, but intelligent. Fine tremor in both hands. Spinal puncture withdrew 10 c.c. fluid. This was cloudy with 2,600 leucocytes per c.c. Lymphocytes 80 per cent. Poly. 20 per cent. Total leucocyte count in the blood, 9,000 with normal ratio. Wasserman, negative.

April 10th. Mass felt in the epididymis on right side. Right seminal vesicles stripped and contents stained for t. b. Neg. Spinal puncture made same date, 20 c. e. fluid being withdrawn. This was cloudy, white cells 6,000, with 80 per cent mononuclear and 20 per cent polys.

April 18th. Spinal puncture, 30 c.c. cloudy fluid; 3,000 leucocytes to c.c., 25 per cent poly, 75 per cent lymph.

April 30th. Spinal puncture; cloudy fluid, 4,000 white cells, with about same ratio of cells.

Practically no change in the nervous system. Skin and sclera jaundiced. Area of liver dullness on percussion increased downward, but no edge felt. Veins over lower abdomen distended.

May 2nd. Spinal puncture; cloudy fluid obtained with 8,000 white cells to c.c., lymphocytes preponderating. Millitary tuberculosis was suspected at this time.

May 5th. Spinal puncture. Cloudy fluid, 16,000 leucocytes with preponderance of lymphocytes. On same day an X-ray showed

pathological process in cervical vertebra. A metastatic tumor was suspected.

May 13th. Liver enlarged and jaundice deepening. Mass felt over the right kidney. For a lack of diagnosis, salvarsan was given several times without any outward influence on the disease.

May 23rd. Purpuric spots appeared on the arms and feet. Patient semi-comatose for the past several days.

May 24th. Small, freely movable lymph node on left chest incised. Pathological report; neuroblastoma, or malignant lymphoma. Red cell count at this time showed 2,500,000.

June 15th. Erysipelas appeared. Cleared up June 24th. Growth about the kidney and liver cleared up; also jaundice cleared to some extent. Nervous system remains about the same. Patient conscious, cheerful and feels pretty good.

July 1st. Patient still improving; looking and feeling better.

July 5th. Spinal puncture. Cloudy fluid; 18,000 leucocytes, ratio practically the same.

July 7th. Total leucocyte count of the blood (not spinal fluid), 40,000.

July 28th. White cells of the blood, 198,000, with 80 per cent lymphocytes. Diagnosis: Lymphatic leukemia.

Dr. Jack Witherspoon said in regard to the Benzole treatment, he had seen Dr. Billings in the Presbyterian Hospital in Chicago treat two lymphatic and one myelogenous leukemias with Benzole, giving 15 m. hypodermically. Dr. Billings reported these as cured one month after treatment.

Dr. Litterer said that Dr. Oughterson's case, especially in regard to the low blood count in the beginning and the spinal fluid count, were very interesting. Dr. Litterer then discussed neuroblastoma, saying that only seven cases had been reported in the literature.

Dr. O. N. Bryan referred to a case of splenomyelogenous leukemia in the Vanderbilt Hospital. 15 m. of Benzole in a salt-coated pill was given daily. The white blood corpuscles were reduced to about half. The other symptoms improved, but the white count went back up when the treatment was discontinued.

Dr. Oughterson, closing, said that all patients taking benzole should have repeated

examinations of the urine on account of the liability of nephritis supervening.

Dr. T. G. Pollard reported the following case and exhibited the specimen: A negro woman, age 23, single. Has enjoyed good health until about four years ago, at which time she was confined to her bed for two or three weeks with pain in the right side in the ovarian region. At this time she had fever and chills. Since that time has had similar attacks, but not so bad. The last attack was on Christmas a year ago. Had some bladder trouble at the beginning; also some whites, which had changed their color. She denies any specific trouble or any irregularity in menstruation.

Present Illness: On May 7th, patient was seized with pain in the abdomen, associated with nausea and vomiting. The pain has continued in the side, confining the patient to bed most of the time. She menstruated for a few days after the colic and has had a slight flow at short intervals since. She has had fever most of the time, but does not know how much. She did not notice the tumor until her attention was called to it about one week before entering the hospital.

Physical Examination. Patient fairly well nourished, mucous membranes quite pale, chest negative. Abdomen presented a tumor which occupied principally the right lower quadrant, but extended beyond the median line and above the umbilicus. It was only slightly movable.

Operation. An incision was made in the median line. The parietal peritoneum was bound firmly to the mass, but going above the attachment I was able to free the adhesions and expose the mass, which was quite hard and irregular. On further inspection, I found it impossible to get behind the mass on account of dense adhesions to the intestines. The coils of intestines at the base of the tumor were freed. At this point a rupture into the sac took place and a foetus appeared. The placenta, from all appearances, seemed to be within the sac and not attached to the intestines, so the removal of the whole mass was considered and done with the exception of that portion of the sac attached to the cecum and small intestines in the pelvis on the right side, which was left and sutured along with

the parietal peritonem closure. The uterus was found to be so incorporated with the sac that it had to be removed. The wound was closed without drainage. The operation will have been done two weeks tomorrow. The patient is up and in good condition.

Points noted: (1) The dense adhesions having formed in such a short period of time. (2) The necessity of leaving a portion of the sac. (3) Drainage not always indicated when a considerable portion of the sac is left. (4) Favorable location for rupture.

Dr. Fort congratulated Dr. Pollard on finding an intraligamentous rupture, saying that in his experience he has seen only one of that type.

Dr. Sanders said he had had one case of the intraperitoneal variety in which the removal of the sac was impossible. He left the sac and drained through the cul-de-sac, the patient having no further trouble. He ventured the opinion that Dr. Pollard's case would have the same experience.

Dr. R. E. Fort reported the removal of the entire clavicle first rib and one-third of the sternum for osteo-sarcoma. This is the first case done so far as Dr. Fort has been able to find after looking up the literature. He stated that the clavicle has been done a few times, but does not know of both having been done. The bones were removed through a T-shaped incision. The management of the blood vessels was also explained. The patient sat up on the fourth day. He is now using Coley's mixed toxins, though it seems that Dr. Coley gets better results than anyone else in their use. Dr. Fort exhibited the little patient and demonstrated the perfect function of the arm resulting. The specimens of bones were also exhibited. Dr. Fort asked if anyone knew of a removal of both clavicle and first rib.

Dr. Howard King reported having seen the removal of the clavicle and part of the first rib, but not all of the latter. As to Coley's fluid, Dr. King thinks the only benefit is in a type of cancer that doesn't recur. Thinks the administration should be indulged in very cautiously.

Dr. W. M. McCabe reported a case and exhibited the cerebro-spinal fluid from same, which latter contained bile.

J. F. GALLAGHER, Secretary.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met in the office of Dr. E. H. Jones on Wednesday afternoon at two o'clock, August 6.

Dr. S. B. Duggan, of Eagleville, read an essay on "Fracture of the Elbow," which was discussed among the members present. On motion of Dr. Rufus Pitts, his paper was requested for publication in the Journal.

The subject of cholera morbus was discussed by Dr. S. C. Grigg and followed by Drs. E. H. Jones and R. W. Read, who also reported some interesting cases on fracture of the elbow.

Dr. B. N. White reported an interesting case of Hematuria, which was discussed by those present.

The subject of medical defense was generally discussed. On motion of Dr. E. M. Holmes, the Society adopted medical defense, provided that the payment of one dollar assessment per year is optional with each member.

Members who were in attendance were: Drs. J. A. Scott, E. M. Holmes, M. B. Murfree, S. B. Duggan, E. H. Jones, A. J. Jamison, B. N. White, Rufus Pitts, S. C. Grigg and R. W. Read.

RUFUS PITTS, Secretary.

BLOUNT COUNTY.

The Blount County Medical Society met in the office of Dr. J. A. McCulloch, in Maryville, Tenn., August 4, 1913, with the following members and visitors present, to-wit:

Members—L. J. Jenkins and B. E. Delozier, of Townsend; L. C. McCutcheon, of Walland; A. M. Gamble, J. A. McCulloch and E. L. Ellis, of Maryville.

Visitors—Dr. J. W. Cates, of Maryville; Dr. N. C. Ellis, of Friendsville; Dr. Saults, of Cades Cove.

The meeting was called to order by the President, L. J. Jenkins. Dr. J. A. McCulloch read a paper on the attitude of the State Medical Association toward mal-practice suits. This paper elicited a very hearty discussion by all present, and the society adopted the resolution set forth by the State unanimously. Dr. Jenkins read a paper, "Why Every Doctor Should Belong to His County Medical Society." This paper should have

been heard by every member of the medical profession in Blount County, as it contained a great deal of valuable material for thought and reflection. Dr. A. M. Gamble read a paper "On Typhoid Fever," which was freely discussed by all present. Dr. E. L. Ellis was to have read a paper on "Gastro-Enteritis," but on account of lack of time the reading of this paper was deferred until the next regular meeting.

This was the best meeting that Blount County Medical Society has had in its history, and we sincerely hope that we may follow it with other enthusiastic meetings.

EDWIN L. ELLIS, M. D., Sec'y.

WHITE COUNTY.

The White County Medical Society held its regular monthly meeting August 14, with ten members in attendance.

Dr. Gaines reported a very interesting case of epilepsy in a young man of twenty years, which resulted in death in thirty-six hours.

Dr. Richards reported a case of apoplexy which resulted in death within twenty-four hours from the first symptom. These cases elicited a splendid discussion.

Dr. Marchbanks delivered a splendid paper on "The Treatment of Infantile Diarrhoea," in which he gave the most recent thoughts on this subject. Dr. Marchbanks is a recent graduate of Vanderbilt and we bespeak a bright future before him.

A. F. RICHARDS, Secretary.

BEDFORD COUNTY.

The Bedford County Medical Society met in regular session July 17, 1913. The society by unanimous vote instructed the President to appoint a committee of three to employ an attorney who will assist the State's Attorney in prosecuting the colored woman, by the name of Holland, now in jail, charged with criminal abortion, whom we all know to be a notorious abortionist. On this committee the President appointed Drs. Coble, Ray and Reagor. The resolution of the House of Delegates of the State Association, which passed at the last meeting, on medical defense of all its members who pay one dollar to a medical defense fund and be ratified on passing two-thirds of the county societies, was brought

up and unanimously passed. Our society then by unanimous vote decided to meet in different portions of the county for the next four meetings, viz: Bellbuckle, Wartrace, Normandy and Unionville. Bellbuckle on August 21; Wartrace on September 13; Normandy on October 16, and Unionville on second Thursday in November, which will be the 13th. The essay committee was instructed to have the subjects for these meetings on lines of as much interest to the general public as possible.

Dr. G. E. Horton, of Wartrace, then read an interesting paper on "The Use of Tuberculin," which was discussed by Drs. Reagor, Patton, Spencer and Moody, after which the society adjourned to meet in Bellbuckle on August 21. Subject for this meeting will be "Pellagra," by Dr. E. W. Patton.

F. B. REAGOR, Secretary.

BOOKS RECEIVED.

MALARIA, etiology, pathology, diagnosis, prophylaxis, and treatment, by Graham E. Henson, M.D., member American Medical Association, Florida Medical Association, Southern Medical Association, American Society of Tropical Medicine, Medical Reserve Corps, United States Army (non-active list), with an introduction by Chas. C. Bass, M.D., Professor of Experimental Medicine, Medical Department Tulane University, New Orleans. Twenty-seven illustrations. C. V. Mosby Company, St. Louis, Mo.

SYPHILIS AND THE NERVOUS SYSTEM. For Practitioners, Neurologists and Syphilologists, by Dr. Max Nonne, Chief of the Nervous Department in the General Hospital, Hamburg, Eppendorf. Authorized translation from the Second Revised and Enlarged German Edition by Charles R. Ball, B.A., M.D., Chief of the Nervous and Mental Department, St. Paul Free Dispensary; Neurologist, St. Joseph Hospital, Bethesda Hospital, Mounds Park Hospital, Minnesota Soldiers' Home, and State Home for Crippled and Deformed Children. 98 illustrations in text. Price \$4. J. B. Lippincott Co., Philadelphia.

The Practical Medicine Series. Volume III. The Eye, Ear, Nose and Throat, edited by Casey A. Wood, C.M., M.D., D.C.L.; Albert H. Andrews, M.D., Gustavus P. Head, M.D. 1913 Series. The Year Book Publishers, 327 LaSalle St., S., Chicago.

The Practical Medicine Series. Volume V. Pediatrics, edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School, Attending Physician Michael Reese Hospital. Orthopedic Surgery, edited by Jno. Ridlon, A.M., M.D., professor of Orthopedic Surgery, Rush Medical College, with the collaboration of Chas. A. Parker, M.D. Series 1913. The Year Book Publishers.

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CLINICAL DATA ON RENAL LITHIASIS.*

Wm. F. Braaseh, M. D.,

Attending Physieian to the Mayo Clinic,
Rochester, Minnesota.

The classic symptoms of renal lithiasis, namely, acute pain referred to the area of the kidney with anterior and downward radiation and hematuria were found present in but 117, or 46 per cent, of the 251 patients operated on for renal stone at the Mayo Clinic from January 1, 1900, to January 1, 1913. In 30 patients, or 12 per cent, of the total the pain was referred to the region of the gall-bladder with posterior radiation suggestive of disease of the gall-bladder. In 32 patients the pain was referred to the lower abdomen with upward and lateral radiation suggestive of appendiceal disease. In 56 patients, or 22 per cent, pain was referred to both sides; largely to the affected side, in 40 or 15 per cent, and more to the non-affected side in 16 or 6 per cent. In 21 patients, or 8 per cent, pain was absent or very slight; in 26 or 10 per cent pain was general over the abdomen. Furthermore, it must be remembered that numerous lesions of the kidney other than stone as well as disease in the perirenal organs will cause similar localization and radiation of renal pain.

Even more confusing from a surgical point of view is the localization of the stone, since in 107 of the 131 cases of stones in the ureter

operated on in the Mayo Clinic the pain was referred largely to the area of the kidney and its radiation was similar to the pain accompanying that of renal stone. It will be seen, therefore, that the subjective localization of pain associated with renal lithiasis is so variable that it offers but few data of exact diagnostic value. In order to exclude lithiasis it becomes necessary to radiograph the abdomen for practically every indefinite pain which is not accompanied by other clinical data to identify it.

Value of the Radiogram.

It is well known that a radiographic shadow located in the region of the kidney does not necessarily indicate renal lithiasis. The majority of such shadows can be recognized from their shape, position and general characteristics, as being caused by renal stone. The diagnosis of the remainder is dependent on the data of identification given by means of the cystoscope. Furthermore, in the last 100 cases operated on for renal lithiasis, stones were found in five cases where they were not shown previously in the radiogram. The types of stone which may not be visible in the radiogram are (1) the soft secondary stone obscured by complicating pyonephrosis, (2) the small stone, size of a grain of wheat or smaller as seen with stone-forming kidneys or so-called oxaluria dolorosa, and (3) cystin and uric acid stones. Shadows occasionally found closely simulating that of renal stone are caused by a calcified area in cicatricial renal tissue, which in all probability alone rarely give rise to much pain. Calcareous deposits in caseated foci with renal tubercu-

*Read before Tennessee State Medical Association, April, 1913.

losis may cause shadows which are frequently mistaken for renal stone. Although such shadows are frequently recognized by their hazy irregular outline in the radiogram they can be definitely identified by means of cystoscopic data. Calcareous deposits in hypernephroma were observed in three cases as the cause of renal shadows. They are usually to be identified by means of the various clinical means of diagnosis, particularly the pyelogram. Two cases were observed in which on exploration one or more cysts with a calcareous lining were found in the renal cortex causing a peculiar circular shadow in the radiogram outlining the wall of the cyst. An organized blood-clot with slight calcification giving a hazy shadow suggestive of a soft stone was found at operation in five instances.

Among the numerous conditions which may give rise to shadows in the perirenal area gall-stones are of particular interest. Although it is not our routine procedure to radiograph patients with symptoms typical of gall-stones, it is done whenever the localization of the abdominal pain is at all suggestive of renal lithiasis. Consequently we occasionally find shadows in the radiogram caused by gall-stones and they must be considered in the interpretation of every shadow in the region of the right kidney. The shadow of the gall-stone is often recognized by the following characteristics: (1) High location, on a level with the eleventh rib or above, (2) circular form, (3) multiple overlapping, grouping, (4) the periphery of the stone usually casts a more definite shadow than the center, so that the resulting shadow is that of a ring, the center of the stone being invisible. When, however, the gall-stone shadow is single, lies in the area of the kidney, and has the irregular shape and uniform character usually found with renal stone, it may easily be mistaken for renal stone, and pyelography will be found the best and often the only method of identifying its origin. Particularly confusing is the clinical picture when a shadow-casting gall-stone is found coincident with other abdominal lesions or with inflammation in the urinary bladder, as occurred in two cases that recently came under my observation.

After demonstrating a shadow, the next step is its identification, and, if caused by stone in the kidney, its localization. Although the position of the shadow in question can frequently be ascertained by its relation to the outline of the kidney as seen in the radiogram, because of technical reasons the shadow of the kidney will often be indefinite. If we have a large definite shadow in the region of the kidney, and if purulent urine containing no tubercle bacilli be obtained from the affected side on cystoscopic examination, the diagnosis of renal stone would be reasonably certain. Furthermore, if the shadow were large, an inch or more in diameter, further localization would, as a rule, be unnecessary since a stone of that size should be readily discovered at operation. However, when a shadow in the radiogram is small and the urine from the affected kidney is comparatively clear, the shadow requires not only identification, but localization as well. The best method both of identification and localization of the shadow is comparing the relation of the shadow in question with that of the injected pelvis, as in pyelography. The majority of stones in the kidney that are large enough to be visible in the radiogram will cause recognizable changes in the renopelvic outline as shown in the pyelogram. If no change from the normal is noted, the shadow in question may be considered extra-renal. The abnormality in outline is consequent to either mechanical obstruction or to inflammatory changes in the tissues. Hydronephrosis when present consequent to stone in the renal pelvis is not as a rule extensive, but is usually confined largely to the distention of the individual calyces. Practically every renal stone, whether in the cortex or pelvis, will be accompanied by more or less dilatation of the pelvis or individual calyces consequent to inflammatory retraction. These changes will vary from that of moderate pyelitis to the marked deformity resulting from pyonephrosis. Often the changes in pelvic outline are consequent to both mechanical and inflammatory influences. Not alone will these changes appear in the pelvic outline as the result of stone, but in consequence of either present or previous infection more or less in-

flammatory dilatation of the ureter will also be found. Occasionally the inflammation and dilatation in the ureter may be more pronounced than that in the pelvis and of considerable value in determining the intrarenal situation of a doubtful shadow. In a few instances only inflammatory changes were found to accompany renal stone so slight as to be of no value in the interpretation. Whereas in previous years exploration for renal stone was not infrequently made with negative findings at operation. In the last 58 surgical explorations for kidney-stone made at the Mayo Clinic stone was found in every instance. This degree of accuracy was made possible largely by means of pyelography.

As a rule, it is comparatively easy to localize stones which are distinctly in the cortex or in the pelvis by means of pyelography. It may be difficult to determine whether stones at the end of calyces can be removed through the pelvis or cortex. As a rule with a shadow merging with the end of the calyx nephrotomy rather than pyelotomy will be indicated and an area of cortical softening is often found adjacent requiring drainage.

Coincidence of Renal Lithiasis and Other Abdominal Lesions.

When the symptoms of renal stone become acute the presence of other abdominal lesions may easily be overlooked and be the cause of subsequent confusion. It should not be forgotten that a person may have two abdominal lesions as well as one. The presence of both nephro and cholelithiasis was proved in nine patients operated on during the past five years in the Mayo Clinic. The clinical symptoms may be quite definite in suggesting the two separate conditions. Even though the presence of renal lithiasis is evident, if a previous history of pain referred definitely to the right subcostal margin and accompanied by gastric symptoms be elicited the gall-bladder should be explored before removing the stone. With cholelithiasis and left renal lithiasis, localization of the pain is usually widely separated which renders the diagnosis easier.

When a diagnosis of a gall-bladder lesion as well as a renal stone is evident, attention

should be first directed toward the condition which causes the most acute symptoms. It must be remembered that lesions of the kidney may cause reflex gastric disturbance though possibly not as frequent as lesions in the gall-bladder, appendix and duodenum. Indefinite radiation of pain, reflex gastric disturbance due to lesions of the kidney may be erroneously attributed to a diseased condition in the gall-bladder or appendix. Not infrequently mild reflex gastric symptoms exist for several years before acute symptoms of the etiologic renal stone brings the patient to the surgeon. Subacute and chronic appendicitis is frequently found associated with renal lithiasis. When the pain with renal stone is persistently referred to the right lower abdomen or when the pain has been referred to that quarter for some time prior to the appearance of pain referred to the region of the kidney, the appendix should first be explored and removed if necessary. Calcareous deposits in the appendix are frequently found present with renal lithiasis. Symptoms suggestive of intestinal obstruction occasionally appear with severe renal colic. Several patients have been observed who had been explored for evident obstruction before coming under our observation. On one patient a colostomy had been done for evident intestinal obstruction. Even though the existence of renal or ureteral stone has been definitely demonstrated, if other symptoms definitely suggest another abdominal lesion, an intraperitoneal exploration is justified before removing the stone. It is quite evident that the diagnosis of renal lithiasis is so intimately related to and so often associated with disease in the adjacent organs that it becomes largely a matter of abdominal diagnosis and should be made by one who has had considerable experience in that field.

Perinephritic Infection.

Perinephritic infection resulting from renal stone occurs more frequently than is generally believed. It may be a chronic process as evidenced by the cicatricial thickening of the tissues and pads of inflammatory fat that frequently are found about the pelvis and kidney. Frequently the perinephritic involve-

ment is acute, and the purulent distention of the perirenal tissue causes severe and continued pain. Long continued pain with kidney-stone lasting over a period of a week or more is often indicative of perinephritic abscess. The patient may bear the occasional renal colic of short duration, but a severe pain persisting over a period of a week or more often brings him to the surgeon. Neither a perinephritic mass nor an enlargement of the kidney is necessarily felt on examination and at operation but a small pocket of pus may be found as the cause of the severe symptoms.

Bulging of the perirenal tissues or tumor was noted in but a small number of cases. Perinephritic infection is found more frequently with cortical than with pelvic stones. A large branched stone filling the pelvis not infrequently is complicated by perinephritic infection which may be the first clinical evidence of the existence of the stone.

Value of Urinalysis.

Visible hematuria was given as a symptom by 141 patients, or 56 per cent of the total. It occurred with typical renal colic in 106 cases, with indefinite pain in 24 cases, and without any pain in 11 cases. Every case of visible hematuria, therefore, even though pain be indefinite or entirely absent, should be radiographed regardless of other symptoms. Blood was found microscopically in the urine of 288 patients, or 91 per cent of the total. In 500 consecutive cases examined routinely in the office who had neither symptoms nor any clinical evidence of kidney lesion, microscopic blood was found in the urine in 146, or 28 per cent. It is found so frequently in the urine as the result of a variety of causes that its presence cannot be regarded of much practical value. The presence of a few red blood cells in the urine should not influence us in the interpretation of a doubtful radiographic shadow. Their presence without pain or other symptom suggestive of lithiasis would not necessarily require a radiographic examination. Pyuria as a subjective symptom is not of so much practical value because patients usually confuse the physiologic sediments in the urine with that of pus. The only way to deter-

mine the cause of apparent cloudiness in the urine is, of course, by means of microscopic examination. Microscopic pus was found present in the urine of 232 patients, or 93 per cent of the total. However, as with microscopic blood the examination of the mixed urine, particularly in the female, will show the presence of microscopic pus in many cases where neither kidney-stone nor any other kidney lesion exists. Microscopic pus in the urine, although suggestive of lithiasis, is not at all indicative of its presence. On the other hand, the absence of microscopic pus, while unusual with kidney stone, cannot be relied upon to exclude it. It is perhaps unnecessary to add that the discovery of small amounts of albumen in the urine is of little or no practical value in the diagnosis of stone.

Functional Tests.

It is frequently quite difficult to estimate the functional capacity of a kidney containing a stone and to determine before hand whether the kidney is to be removed or only lithotomy is indicated. When, on cystoscopic examination the urine from the affected kidney appears cloudy and diminished in amount one may infer that but comparatively little renal function remains. It is remarkable how often the urine becomes clear and normal in amount after the stone is removed when cloudy urine was previously seen coming from the affected kidney. On the other hand, the urine from the affected side may appear to be comparatively clear on cystoscopic examination and at operation widespread destruction of cortical tissue may necessitate nephrectomy. When the pus becomes caseous and oozes out of the meatus only on massaging the kidney we are usually safe in inferring that nephrectomy is advisable. Not infrequently on meatoscopy no urine will be seen coming from the ureters on the affected side for many minutes, often 10 or 15. Ineffectual peristalsis of the meatus or continuous contraction may be seen during this period, which is probably best explained by reflex contraction from cystoscopic irritation in a ureter rendered irritable by the stone. One might easily interpret this evident cessation of secretion as due to renal destruction. Stone

in the kidney will usually cause marked diminution of functional activity as demonstrated by the various functional tests. Thus with phenolsulphonephthalein which permits of a comparatively accurate functional estimate, with many cases of renal stone, but one-half of the amount of the dye was returned from the affected kidney as compared with that of the normal kidney. This would lead one to infer that but one-half of the kidney's function remained and therefore nephrectomy might be indicated. In operating on these patients the kidney was often found but slightly diseased and after operation the normal functional activity returned. This is an example of the fundamental weakness of all chemical renal functional tests, namely that functional activity of the kidney can be quite definitely ascertained at the time of examination, but not so its functional capacity when normal conditions are restored. However, the functional test has several elements of value which should not be overlooked. In cases where there is a total absence or mere trace of phthalein return from the affected kidney, a nephrectomy is usually indicated even though the urine appears comparatively clear. Again in cases in which the question arose as to whether or not a shadow was intrarenal a marked comparative diminution of functional activity on the side in question would be suggestive of renal involvement. Although the majority of stones in the kidney will cause more or less comparative diminution in functional activity, occasionally no material difference will be found between the two sides. Equal functional return would not therefore exclude the possibility of stone.

DISCUSSION.

DR. PERRY BROMBERG, Nashville: We are indebted to Dr. Braasch for giving us such a valuable paper on renal lithiasis and its clinical significance. I am very sorry that I was so disturbed during the reading of the paper that I did not catch the part I was particularly interested in. I know of no subject that deserves more careful consideration upon the part of the general practitioner than a careful differential diagnosis which will enable us to decide whether or not a patient has a kidney stone. I have myself within the past two months had a disastrous result from

the fact that I was relying entirely on the clinical signs in making a diagnosis.

I was called to see a personal friend at 3 o'clock in the afternoon, with intense pain over the kidney that could be covered with the ball of the thumb, radiating down the ureter into the bladder, with frequent desire to urinate and pain in the right testicle. This patient had a temperature of 100 degrees; his pulse was 90. He said he had a desire to evacuate his bowels, but that he had made unsuccessful attempts. Without anyone's advice, at 6 he took a dose of oil which he vomited. The symptoms were not improved, and when I saw him it was clearly a case, as I thought, of ureteral calculus. I concluded that it was such from the clinical symptoms, and that he was probably passing a stone from the pelvis of the kidney through to the bladder. I ordered a hot bath, and gave a hypodermic of $\frac{1}{4}$ gr. morphia, and hot fomentations were applied to the side. When I saw him at 10 o'clock the pain had localized itself in the region of the appendix. Pain was continuous in the bladder. There was frequency of urination; there was continuous pain in the left testicle, and not only that, it was drawn up tightly to the left. I had a consultation with Dr. Haggard. At 10 p. m. there was then some question, but still I believed it was a renal calculus. We could not decide, but we thought it was safe to let the man go over until the next morning. The next morning he was removed to the hospital, when appendicitis was readily diagnosed. Pain had localized itself; there was leucocytosis; the temperature had gone up. There was no evidence of pus or blood in the urine. This was a typical case, clinically, of stone in the kidney. The truth of the matter is he may have had both stone in the kidney and appendicitis. He had a perforated appendix and died the following night.

At the last meeting of the American Medical Association, Dr. Murphy of Chicago brought out a method of determining or differentiating between appendicitis and stone in the kidney, and whether the continued pain was from a chronic appendicitis with adhesions, or from a stone in the kidney. His method was to sit a patient on the table, and with the patient leaning over in this way (indicating), he then struck the psoas muscle a good hard blow with his fist, and if the patient complained of pain in the region of the appendix it was most likely to be appendicitis. If the pain was referred to the region of the kidney, it was most likely a kidney stone. I believe that this is of some clinical value.

DR. BRAASCH (closing the discussion): The remarks made by Dr. Bromberg are in accord with my own views on the subject. The method recently brought to our attention by J. B. Murphy of striking the edge of the hand forcibly against the costo-vertebral angle and causing se-

vere pain if the kidney is involved is not always to be relied upon. Absence of such pain is frequently found when the kidney is involved, and marked tenderness may be present with disease in the organs surrounding the kidney. The more experience I have in the diagnosis of kidney stone the more am I convinced that the ordinary physical findings are of little diagnostic value. The data obtained by the use of the radiograph and cystoscope, working together, are absolutely necessary to accurate diagnosis and intelligent treatment of renal lithiasis.

THREE CASES OF PROLONGED GENERAL SUPPURATIVE PERITONITIS POINTING AT THE UMBILICUS, INCISION AND CURE.*

By W. D. Haggard, M. D.,
Professor of Surgery Vanderbilt Medical College,
Nashville, Tenn.

The cases herewith briefly reported from an exceedingly rare, if not an entirely unique group of cases of peritonitis, certainly so far as my own experience goes and that of the literature. They are reported chiefly on account of their rarity and extreme interest, as well as to show the remarkable curative powers of nature and what really is accomplished by nature with her natural defenses. These three cases were all clinically of acute appendiceal origin, of extreme initial severity, but were not operated on in the beginning of their attacks and all went through a grave acute peritonitis, with the abdomen of all three cases enormously distended with purulent material which pointed at the umbilicus eighteen days, four weeks and four and one-half weeks respectively. They all had simple incision of the protruding thin, red umbilicus with evacuation of enormous quantities of fluid, with complete and so far permanent recovery.

The first case Mrs. E. E., twenty-seven years of age (had typhoid fever three years before and pneumonia two years previously. Her youngest child was eighteen months old.) On January 1, 1910, she was taken with severe abdominal cramp all over the abdomen,

which lasted during the night. After the pain subsided she took some purgative pills, which acted very freely. This was followed by soreness all over the abdomen and special tenderness on the right side. On the third night the patient was nauseated and vomited a large amount of fluid, but has not vomited since. On the 13th day of her illness she was transported fifty miles to the Tennessee Hospital. When she reached there she was in a very critical condition, temperature 102.3, pulse 126, small and wiry and exceedingly feeble. She looked badly, with sordes on the teeth, dull pupils, hurried respiration, thoracic breathing and dusky skin. The abdomen was extremely distended, with a slightly prominent umbilicus, which was the site of tenderness. There was some fluctuation in the abdomen, as high as three inches above the pubis. Her leucocyte count was 8,000, hemoglobin 90 per cent. It was apparent that she had a generalized peritonitis, which we presumed to be of appendicular origin. Her condition was so precarious that operation upon admission, after such a long journey, was deemed unwise and she was put in Fowler's position and given normal salt solution 1½ pint per rectum every two hours. Her nourishment consisted of panopeptone and she was given some strychnine and an ice bag. Much to our gratification on the following morning, after having slept somewhat at intervals, she appeared much brighter and the temperature had gone down to 99.1-5 and pulse to 120. The temperature continued below 100 for four days, when it rose to 102½ and pulse to 120, which was the eighteenth day of her illness. Meanwhile the abdomen had become very prominently distended and appeared very ascitic, was distended, fluctuant throughout and dull in both flanks and lower hypogastrium. The umbilicus had become red and pouched out to the extent of ¾ of an inch. It was plain the abdomen was full of pus and as the umbilicus was obviously pointing it was incised under local chloride of ethyl spray and with the patient on her side about three quarts of thick, yellow pus was evacuated, after which the pulse and temperature soon went down to normal and she was discharged well

*Read before Tennessee State Medical Association, April, 1913.

twenty-seven days afterwards. Meanwhile the abdomen had not been irrigated and no mechanical device was employed for drainage as copious quantities run out of the umbilical aperture for a number of days following the operation, after which it healed entirely. She has remained well since and gained a number of pounds.

The second case was a girl eight years of age (a patient of Dr. G. M. Hite, of this city.) During the first week in December, 1910, she was taken with sudden severe epigastric pain followed by vomiting. She had been well previously and attended school on the day of the night on which she was taken. She suffered during the night in spite of household remedies and the next day her temperature was 101, with rapid pulse and continued vomiting. There was considerable difficulty in getting the bowels moved and she complained of great abdominal tenderness. Futile efforts were made at purgation for several days, meanwhile the pain being kept assuaged by opiates and the increasing abdominal soreness yielded somewhat to local hot applications. The little girl improved apparently after the first week, but continued in bed with temperature, occasional vomiting, abdominal soreness and obstinate constipation and loss of appetite. She remained in this condition for some weeks and on the 9th of January, 1910, she came under the observation of Dr. Hite, with whom I saw her. The abdomen was enormously distended, looked like a child with advanced ascites and the umbilicus was protruding, very red and thin. Her temperature was 102½ and she had been having rises each afternoon. It was obvious that the abdomen was absolutely full of fluid, which in the light of the sudden and severe onset of her trouble was supposed to be purulent, as the result of an appendiceal attack some weeks previously. The leucocyte count was 14,000. She was removed to the hospital and under gas anaesthesia the umbilicus was incised and a great quantity (unmeasured) of purulent fluid escaped as the child was turned on her side. The temperature at once fell to normal and did not rise above 100 thereafter. She remained in the hospital from January 9 to January 24, at which time

the sinus had closed entirely, the abdomen was normal in contour and she was free of fever and has remained well since.

The third case was also a little girl of seven, whom I saw in consultation with Dr. A. T. McCormack, of Bowling Green, Ky. She had had a typical and unusually severe onset of appendicitis three and one-half weeks previously. Her condition was so extreme and the prostration so very severe that it was apparent that early operation would be very hazardous. Accordingly she was tided over what appeared to be the acute part of her illness, but she continued in bed with greatly increased abdomen and continued temperature. At the end of three and one-half weeks the abdomen had become so enormously swollen that in the presence of continued temperature and the rather unusual recent swelling and tenderness of the umbilicus, caused me in the light of the two previous cases, which I had had, to advise the same procedure of umbilical incision under ether of ethyl inhalation, which was followed by prompt recovery and permanent cure.

The patient has had some slight attacks of appendiceal colic since for which interval operation has been advised.

I have been unable to find any reference to this type of acute peritonitis following appendicitis. Of course, in the chronic cases and particularly those of tubercular origin umbilical pointing and suppuration is rather frequent and rarely pathognomonic. I have seen several examples of that type.

I think that the only explanation in these cases that survive the onslaught of the beginning infection over really long periods is to be found in the amount of resistance offered by the patient and the virulence of the organisms, in spite of the clinical onset which perhaps was not very great. The first pus which accumulated was evidently of the defensive type which with its bacterins and opsonins continued in the ascendancy. Phagocytosis was unable to take care of this tremendous effusion and nature provided her route for evacuation through the thinnest part of the abdominal wall. To be sure we have all seen many cases of localized appen-

dical abscesses and other abscesses for that matter, which have pointed and ruptured elsewhere through the abdominal wall, particularly in the pre-operative days. Many examples of spontaneous rupture through the stomach, duodenum, small intestine, colon, vagina and diaphragm have been observed, but certainly the spontaneous "pointing" at the umbilicus in acute generalized suppurative peritonitis of appendicular origin must be extremely rare.

When I use the term generalized peritonitis I do it with the realization that it is extremely difficult to say without a post-mortem whether or not all of the abdomen is involved. I am using this really as a descriptive term and can only say that the abdomen in all three cases were proportionately as large with the two children as a grown woman would have been at term and with the adult case (first case) the abdomen was certainly as large as a six months gestation and in all three the fluctuation was as distinct as any ascites, the dullness was absolute in both flanks and somewhat tympanic on top. In one of the cases free intestine could be seen, but, of course, the aperture in all three was extremely small and would not have sufficed for adequate drainage had it not been at this place. The umbilicus on account of its peculiar conformation lends itself to this simple incision and remains patent sufficiently long for entire evacuation to be completed.

Of course, in common with other surgeons I have seen a great many localized appendicular and other intra-abdominal collections of pus, but certainly nothing comparable to these cases.

Of all the cases of abdominal peritonitis which had undergone suppuration that I have observed have been of the localized type and they have all ended fatally in spite of irrigation and every other means.

These cases, therefore, form a peculiarly distinct group and are not reported as a triumph of surgery, but simply to show what nature can and will do. While operation was demanded and was curative in all yet the real battle had been waged and won by the patient. All that remained was to open the pointing umbilicus in each case, as one would

a gum-boil and allow the enormous quantity of pus to escape. They probably would have perforated themselves in a few days more and the same results would have been obtained.

In view of the very large mortality in unmolested cases of general peritonitis this group is very interesting.

The mortality in 461 cases of diffuse, progressive free peritonitis from appendicitis reported by Gerster during a period of eleven years averaged 31 per cent; the maximum for any year was 79 per cent and the minimum 14 per cent. This represents the severe acute cases that come into Mt. Sinai Hospital and were more especially of the three, four and seventh day duration and even longer. The last mortality per cent, 14, is probably very near what one would have to expect with this type of case.

It must be remembered in Murphy's cases they were all early and his remarkable result of only two deaths in 69 cases must be of necessity in the early stage. The average in his first fifty cases being only twenty-six hours. It is true they are all perforative and communicating with the open viscera. That is the difference between the apparent mortality rate. It cannot be denied, however, that the method so strongly advocated by Murphy for early operation, rapid and gentle operating without sponging, efficient irrigation, the employment of the Fowler position and the use of proctoclysis, together with gastric lavage, when necessary, and hypodermoclysis are the means which are being so successfully employed in American hospitals.

In spite of all that has been done, however, it cannot be gainsaid that the advanced third degree cases are still notoriously murderous, and as Isaac's, who reported 19 cases with 9 deaths with a mortality of 47 per cent, represent about what is generally accomplished in these cases.

In view of these facts, therefore, the remarkable pathological resistance evidenced by the cases herewith presented is offered as an explanation for their recital.

DISCUSSION.

DR. T. HUGH CARTER, Memphis: I appreciate most heartily Dr. Haggard's paper from the fact that I have had a case in the last few months similar to the one he has reported. A patient was sent to me from a distant city believed to have a tubercular abscess pointing toward the umbilicus. The patient did not prove to be tuberculous. We opened through the umbilicus under local anesthesia and a great deal of sero-purulent fluid escaped. After several days, say two weeks, the patient seems almost well and ready to go home, but I believe the next morning the patient got worse and in five or six days' time a local abscess formed over the appendix. At the second operation the appendix was found entirely destroyed, having undergone suppuration. After opening an abscess and establishing drainage, the patient recovered and went home a few days ago, and has gained ten pounds in weight in this time.

We tried the Von Pirquet test, but we did not get a tubercular reaction, and we believed the whole trouble was due to appendicitis, with peritonitis. This case is all the more interesting because I have been unable to find anything like it in the literature.

DR. JERE L. CROOK, Jackson: Inasmuch as the author of the paper has reported three such rare and unique cases which he has recently had, it seems we are not going to have as free a discussion as the paper deserves. I have never had the experience Dr. Haggard has had of having an abscess following general septic peritonitis pointing in the umbilicus, but all of us have had and cared for the cases of general septic peritonitis, and as the doctor in his paper went into that subject somewhat it is my excuse for reporting a case I had recently.

I operated on the fifth day following a rupture of the appendix. There was dullness in both flanks, and the most enormous distension of the abdomen I have ever seen, the patient being a girl fourteen years of age. When she reached the sanitarium her temperature was 96 and pulse 136. She was practically cyanosed. The respiration was shallow, so that it did not seem justifiable to take her to the operating room. She came 11 miles from the country on a cold night to Trenton and had been brought in a baggage car to Jackson, arriving at 5:30 in the morning. We worked on her with stimulants and external heat, etc., to see whether we could get her in a condition to take her to the operating room. After three hours she reacted somewhat, although at the time of the operation the temperature was 96 and pulse 136, I thought that probably the patient might die on the table, as she was in such a state of collapse, but that if the parents were willing for the operation to be done and would give her the benefit of surgery. The child

was taken to the operating room, an incision was made through the rectus muscle, through which pus escaped freely, and seven or eight feet of intestine covered with lymph. I attempted to reduce the distended intestine and could not replace it within the abdomen, after trying for several minutes, her condition being very desperate. I simply incised the intestine after putting a purse string suture around the point of incision, cutting within the suture line, and then emptied a quart and a half of septic products from the intestine. When this was done the purse string was drawn tight and the intestine reduced and a drainage tube inserted in the rectus incision and another in the loin. The patient was taken off the table, given the Murphy treatment straight out, with Fowler position, with nothing by mouth for six days, using saline solution by the Murphy drip method by rectum. In this way she was saved, and I had a letter from the parents a few days ago stating that she was up and about the house and feeling fine. When the intestine came out, the distension of the abdomen was so great the child undoubtedly would have died before that could have been reduced in the abdomen. While I hated to incise the intestine in that condition, it was a question of doing something or letting the patient die on the table, and I resorted to that extreme measure.

DR. ROBERT MANN, Memphis: I do not know what I can say with reference to Dr. Haggard's paper, but inasmuch as Dr. Crook has opened up the general subject, I will take advantage of this opportunity to say a few words.

Dr. Haggard's paper impressed me with the wonderful protective powers of the peritoneum or the resistance some of these cases seemed to possess. I was also impressed with the importance of not trying to do too much in the peritoneal abscesses. A simple incision is generally all that will be indicated; incise as you do in any form of abscess you may imagine. In these cases, after three or four days, protective adhesions become organized and have new formed vessels in them, and if you go in and break these up you not only scatter the infection to the different parts of the peritoneal cavity that have not been involved, but you open up fruitful fields of absorption, for these raw areas are highly absorbable.

DR. E. T. NEWELL, Chattanooga: These cases that Dr. Haggard reports are extremely interesting. It has never been my pleasure to have peritoneal effusion or abscesses pointing at the umbilicus. We have all had abscess of the appendix with peritonitis, but they are usually localized in the region of the appendix. I can recall two cases in which I opened up at McBurney's point, where we had free sero-pus, and in one of these cases the appendix floated out as a gangrenous mass. Usually in these cases we have

adhesions formed, but in this particular instance by running my finger around for a few inches I found that there were no adhesions apparently formed and the pus and serum were free in the peritoneal cavity.

I would like to hear what Dr. Haggard has to say with reference to what became of these appendices. As I understood the paper, he did not remove the appendix in either case. His is a mighty good technic, simply opening the abdomen and letting out the fluid and getting out as quick as possible. I remember two or three years ago, when talking to the late Dr. Joseph Price of Philadelphia a few months before his death, he said to me, if you are going to open a patient's abdomen for appendicitis, no matter what the condition, you must get the appendix and remove it. You do not want to come out without it. You must go down and get the appendix, clean up and break up those adhesions. I knew Dr. Price was a great teacher and had a hobby, and that was one of his hobbies. I did not intend to follow that practice at any time, and it was just after that visit to Dr. Price, I had my first case in which the appendix floated up and floated out, and I simply drained. Had I gone on further and sought out the adhesions and tried to break them up and place everything in a purely theoretical perfect condition, I am quite sure I would have lost my patient.

This paper is unique, and one I am exceedingly glad to have had the pleasure of hearing it.

DR. A. F. RICHARDS, Sparta: I would like to make a few remarks on an experience I have had along this line. We are taught by surgeons generally that these conditions ought to be diagnosed early enough so that operations can be resorted to before there is free pus in the cavity. This is sometimes impossible and we cannot do it. We are often called to see cases with the abdomen full of pus, just as in the case the doctor has reported. I can call to mind a case that I was called to see in the night time, the patient being a young boy, 15 or 16 years of age, with his abdomen as tight as it could be. He was almost pulseless and seemed to me moribund. I had no hopes that the boy would survive any operation, but after explaining to his father that he would in all human probability die, I said that there was a possible chance for him if his abdomen was opened. He finally decided to have it opened. The abdomen was opened under general anesthesia, and we had a free flow of a large quantity of pus and fecal matter. I did not attempt to do anything except, after opening, to introduce a gauze drain, which was left in place. To my great surprise, that boy recovered and is living today. The operation was done four or five years ago. That happens occasionally, and where you do not have pointing you can get some results by opening somewhere else. I believe the

secret of success in such cases is to do as little as possible, simply make an incision and let them alone.

Another case nature worked out for Dr. Breeding and me one time was one of hernia with resulting rupture of the bowel. Nature operated on that woman two or three hours before we arrived fortunately, and when we got out of the buggy we smelled the woman fifty yards away. That woman got well. There was drainage of fecal matter and pus, and she was saved by the Lord before the surgeons arrived.

I have seen some other cases of that particular kind in which there was free pus in the cavity. These cases of general peritonitis are best handled with great care, and they should be touched lightly.

DR. M. B. GARNER, Goodlettsville: I desire most sincerely to thank Dr. Haggard for his paper and also for having made a diagnosis for me in a case about a year ago. This woman who had previously been operated on for total hysterectomy, had an umbilical mass there and she seemed to be desperately ill. With a free incision she recovered promptly. The abscess was walled off.

DR. HAGGARD (closing the discussion): I have very little to add except simply to define these cases as being unusual and not a thing one should expect. Of course, we should not wait for "pointing" in cases of peritonitis, for it must be exceedingly rare, but when these cases came under my observation the pointing was evident, nature had cured them, and I simply opened them as I would a gum boil.

What to do in cases of general peritonitis in the active stage is a totally different proposition, and should be operated on as soon as possible. On the contrary, if for any reason a case of acute localized peritonitis from the appendix cannot or is not operated on in the beginning, it should not necessarily be operated, for when we take them on the fourth or fifth day the mortality is extremely high. If the patient is holding his own and an effort is made towards localization, this type of case can go through the acute stage, as has been taught by Dr. Oschner, so that we can incise the abscess on the tenth or twelfth day, cure the patient and later remove the appendix in the interval.

As to Dr. Newell's question, what became of the appendices in these cases, left in when abscesses are opened. Only one in four gives subsequent trouble. If the appendix runs out with the abscess the patient is cured, but that does not happen as often as we think it does. Rarely when the appendix sloughs, it floats out in the pus.

It is well that Dr. Newell did not follow the advice of that great master, Dr. Price, because it is bad business to gouge out an appendix that

has already done its worst, and is like the bursted fire-cracker that ignites the building. Nature has spent much effort in extinguishing the flame. The adhesions are the patient's protection. Don't break them up when they form the limiting membrane of the abscess. In localized abscesses, open the abscess and run while the pus is running.

SUB-MUCOUS RESECTION OF THE NASAL SEPTUM.*

By Hilliard Wood, M. D.,

Professor of Eye, Ear, Nose and Throat, Vanderbilt Medical College, Nashville.

Deformities of the nasal septum are among the most common physical defects met with in the human body. Zuckerkandl, who examined 370 skulls, found septal deformity in 140, i. e., 37.8 per cent. MacKenzie, in an examination of 2,152 skulls, found it in 1,657, or 76.9 per cent. Delavan found deviation of the septum in 50 per cent, Jarvis in 81 per cent and Von Kline in 98 per cent.

We have, it seems to me, been rather slow to recognize and to appreciate at their full value the results of septal deformities. Among these results may be mentioned interference with nasal respiration; hypertrophic rhinitis; post-nasal catarrh; a low grade of pharyngitis, and even laryngitis, due to mouth breathing; impaired hearing due to defective ventilation of the middle ear; loss of the sense of smell; and certain reflex neuroses, such as hay fever, persistent sneezing which may be, and usually is, perennial; and pain due to the pressure of the deflection upon the outer wall of the nose. Among these results let me emphasize persistent sneezing which is so commonly associated with septal deformity that I have come to regard them in the relation of cause and effect and to depend upon sub-mucous resection for the relief of this annoying symptom.

Septal deformities began to attract attention about the middle of the eighteenth century and efforts, at first crude and ineffectual, were made for their correction. The history

of septal surgery for the past one hundred and fifty years is an interesting illustration of evolution, during which one method of operating succeeded another, each aiming at the ideal and each failing in that aim, gave place to its successor. The very multiplicity of these methods proves, if such evidence were needed to prove, their inefficiency. Yet actual progress was made, and the prevalent methods of operating during the past two or three decades, such as the Asch and the Bosworth operations, did, as a matter of fact, give much relief to the more distressing symptoms.

It was not, however, until the present century that the operation for septal deformity was placed upon a scientific surgical basis by the introduction of sub-mucous resection, first by Otto J. Freer in this country and later by Killian in Europe. The operation of sub-mucous resection is based upon the self-evident fact that the cause of the deformity is in the hard tissues of the septum, namely, the bone and cartilage, and that the soft tissues, such as the muco-perichondrium and the muco-periosteum, would, if allowed to do so, remain in the median line. The object of the operation, therefore, is to remove the deformed bone and cartilage and to allow the soft tissues from either side of the septum to come together and adhere in the median line, thus forming a membranous partition.

Sub-mucous resection is indicated in those cases where the septum is deviated to either side, or to both sides at different levels as in S-shaped, or zig-zag deviations. It is especially applicable in deviations involving the upper portion of the septum which, as Coakley says, "Could never be corrected by the older methods of treatment." Where the body of the septum is in line but has upon it spurs or spines, sub-mucous resection is still applicable, although here the Bosworth, or saw, operation has the two advantages of being more quickly done and requiring less skill. There is a condition calling for sub-mucous resection to which I wish to direct special attention. I refer to those cases in which the septum is not deviated, neither are there spurs, or spines, upon it, but the bone or cartilage is too thick. I have noticed this

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thickening especially in the upper anterior part of the septum. I have, in operating, after separating the soft parts, found the bone and cartilage a quarter of an inch or more in thickness. In the ordinary method of examination one is liable to overlook this thickening. In looking into one side of the nose at a time it shows as a slight fulness in the upper anterior ethmoid region. It is only when we place a speculum in each side of the nose and look at both sides of the septum at the same time that we get a correct idea of the extreme thickening. No pipe is larger than its calibre at its most contracted point. The breathing channel of the nose is no larger than at its narrowest point. These bi-lateral thickenings encroach upon each nasal fossa and greatly reduce the freedom of nasal respiration. When the thickening is removed the aggregate increase in the calibre of the nasal forssae is equal to the thickness of the cartilage or bone removed. The increased freedom of nasal breathing is often wonderful.

For the prompt healing and successful result of sub-mucous resection preparatory treatment is often essential. Septal deformity is often associated with, and may cause, other morbid conditions in the nose. Especially is this true of hypertrophic rhinitis. Where other pathology is present I regard it of prime importance that such pathology should first be corrected, so that when we come to the sub-mucous resection we may have a nose otherwise normal. Disregard of this rule in some of my earlier operations caused delayed healing and prolonged after-treatment.

I will first give a brief outline of the operation and will then discuss the different steps more in detail. Under cocaine anaesthesia and with the aid of artificial illumination an incision is made through the muco-perichondrium on one side of the septum at the junction of the skin and mucous membrane. With elevators introduced through this incision the muco-perichondrium and muco-periosteum is separated from so much of the cartilage and bone as it is desired to remove. Next the septal cartilage is divided with a knife along the line of the original in-

cision, taking care not to cut through the mucosa of the opposite side of the septum. Through this opening in the cartilage elevators are introduced and the soft parts separated from the opposite side of the septum, freeing such parts of the cartilage and bone as it is desired to remove. The cartilaginous and bony septum is now freed from soft parts as far in every direction as the deformity extends. The cartilage is removed in one piece with Ballenger's swivel knife and the bony septum removed piece-meal with heavy bone forceps. When all deformity is corrected the wound is wiped clean of blood and chips of bone, the muco-perichondrium and muco-periosteum of the opposite sides are pressed together in the median line, gauze tampons are introduced in each nasal fossa to press the opposite mucous membranes together and the operation is completed.

To describe more in detail the different steps. I have found that a preliminary hypodermic of morphine and atropia adds much to the quietude of the patient and to the relief of the after pain. We use this as a routine. In preparing the patient I have the face scrubbed with soap and hot water. Some go further and sterilize the face with bichloride solution and cover it with sterile gauze. These latter precautions I have not adopted and so far have noticed no harm from their omission. The short hairs in the vestibule of each side are clipped so they will not interfere with the view of the field of operation. I operate with the patient sitting straight up. Some place the patient on a table in a semi-reclining position, the operator sitting on a high stool to the patient's right. It seems to me this position has much to recommend it, especially in view of the length of the operation. A 20 per cent solution of cocaine, made in a solution of adrenalin 1:5000, is applied by absorbent cotton to each side of the septum for thirty minutes before operating. This relieves practically all pain and controls hemorrhage. General anaesthesia is used by a very few, but except in the case of young children this seems unnecessary. Recently I operated on a child nine years old with cocaine and without trouble.

The side in which the original incision is made and through which the operation is done is to some extent a matter of choice of the operator, right handed operators operating through the left nasal cavity and left handed operators operating through the right nasal fossa. However, I make the original incision on that side of the septum from which, on account of its shape, I think the soft parts will be more difficult to remove. I, therefore, make the original incision on the side of the greatest convexity, and especially so if this side presents spurs or spines.

This incision is ordinarily made at the juncture of skin and mucosa. In any event it should be placed in front of the portion to be removed. To make this incision too short is an error, it handicaps the entire operation. Ordinarily it should not be less than three-quarters of an inch in length. In beginning the separation of the soft parts from the cartilage and bone sharp elevators are used, later dull ones may be substituted. I have found Freer's elevators satisfactory. One will soon notice that the attachment between the soft and hard parts varies very much under different conditions. This attachment is loose in the young, dense in the old. It is more noticeable in the front part of the septum than it is further back and is greater in the lower parts of the septum than above. The adhesions are especially dense along the sutural lines when the component parts of the septum have been displaced and over-ride each other. Here the separation must be done with extreme care to avoid perforation.

There is no part of the operation requiring more delicacy and care than the incision dividing the septal cartilage. This incision is made along the line of, and of the same extent as, the original incision. It must divide the cartilage, but must not perforate the mucosa of the opposite side; to do so means a permanent perforation of the septum. There is the difficulty. The incision can be made with any small scalpel. I use a Beer cataract knife. Of more importance than the character of the knife used is the position in which it is held. If the knife is held at right angles to the cartilage, perforation of the

opposite mucosa is difficult to avoid, but if the knife is held obliquely, say at an angle of 45 degrees or less, with the cartilage, perforation of the opposite mucosa is more easily evaded. Elevation of the mucoperichondrium and mucoperiosteum of the opposite side of the septum is made through this cartilaginous incision and is usually not difficult. For separating the soft parts during the removal of the bone and cartilage Mosher's speculum is employed.

For the removal of the septal cartilage Ballengier's swivel knife is generally used and answers every purpose. At least one-eighth of an inch of this cartilage should be left along the bridge of the nose to prevent sinking in of the nose—saddle-back nose. Next the deformed bone is removed piece-meal with heavy bone forceps. I have found the Jansen-Middelton forceps well adapted to this work. The base of the septum, where it joins the hard palate is frequently thickened and displaced, and its removal is essential to the success of the operation. This I have found more easily done by the use of Killian's septal chisel.

When all the deformed cartilage and bone has been removed the wound is wiped clean and dry and the mucous membranes of each side pressed together in the median line. This membranous septum should be central, vertical and smooth, and the patency of each nasal fossa should be manifest. To hold the membranes together in the median line and to prevent hemorrhage each nasal fossa is packed with gauze. For this purpose small strips of gauze, 1x4 inches, are used and are placed first in one side and then in the other in such a way as to keep the septum straight and in the middle line. My assistant, Dr. Herschel Ezell, devised the practice of placing sterilized rubber tissue on each side of the septum before the gauze packing is put in. This lessens the pain and the danger of displacement of the membrane when the packing is removed. The rubber tissue is cut of such size and shape that no part of the septum is touched by gauze. The use of rubber tissue is so helpful that it has been adopted by us as a routine. The gauze packing is removed at the end of twenty-four hours and,

as a rule, is not replaced. Some remove the gauze at the end of twelve hours, which seems to me to be risky, on account of the danger of hemorrhage. If the membranous septum is displaced to one side that side may be re-packed with gauze for one or more days until such displacement is corrected.

The after-treatment, subsequent to the removal of the gauze, consists in the patient letting his nose alone and coming to the office once a day to have it douched with warm salt solution to remove the secretions. Healing is usually complete in from four to eight days. The relief of nasal obstruction and its associated symptoms is very gratifying.

There are certain difficulties which may occur during the operation or after-treatment which I wish briefly to mention. The operation is slow and somewhat tedious, lasting from three-quarters to an hour, and while it is not painful it may become a tax upon the fortitude of nervous patients, especially of children. Some patients have an idiosyncrasy to cocaine. In them its use becomes either difficult or impossible. In one such case I got through by the hypodermic injection of strychnia, which seemed to lessen the toxic symptoms of cocaine. Of course, other local anaesthetics might be tried or general anaesthesia substituted.

Hemorrhage is an accident which may occur during or after the operation. In a series of eighty cases I have met with this three times; once about the middle of the operation, when it became so profuse and persistent that I finally gave up trying to complete the operation and packed the nose to control hemorrhage. In the second case the hemorrhage occurred some two or three hours after the operation, and was so profuse that I had to tampon both nasal fossae both in front and behind. Notwithstanding this the ultimate result in this case was excellent. In the third case the hemorrhage occurred after the removal of the gauze packing at the end of twenty-four hours. It separated the two membranes of the septum, forming a haematoma of the septum and completely obstructing each nasal fossa. The result in this case was delayed healing, but ultimately a good result.

Perforation of the septum is an untoward result and in a series of eighty cases I have had it three times. This can usually be avoided by care and patience.

Speaking of the complications, Phillips says: "These are hemorrhage, erysipelas, follicular tonsillitis, inflammation of the accessory sinuses, fauces or larynx; unintentional injury to neighboring parts, septal perforations, synechia or atresia of the nasal passages, septal abscesses and haematoma." Fortunately I have observed none of the above except three perforations and three hemorrhages.

A depression of the bridge of the nose, known as saddle-back nose, is a rare sequel. It is more apt to occur if the patient is very young and if the septal cartilage is taken out too close to the bridge. This depression, BALLENGER states, "is due not so much to a sinking in of the nose as to its non-development."

SUMMARY OF SUB-MUCOUS RESECTIONS DONE BY WRITER.

Total number of sub-mucous resections.....	80
Sex.....	
Male.....	56
Female.....	24
Direction of.....	
Deviation	
Right side	37
Left side	33
No record	10
Youngest patient	9 years of age
Oldest patient	58 years of age
Perforations	3
Age of patient.	No. of operations.
9	1
13	1
14	3
17	2
18	3
19	3
20	4
21	4
22	6
23	1
24	6
25	2
26	2
27	2
28	3
29	3
30	1

31	1
32	1
33	4
35	1
38	1
42	1
43	2
44	4
49	1
52	1
53	1
57	1
58	1
No record	13
Total	80

DISCUSSION.

DR. RICHARD McKINNEY, Memphis: I was not expecting to be called upon to open the discussion on this paper, but rather to take my order as one of the general discussers of it. I have done considerable submucous resection work, and from my personal experience and observations, I have come to some conclusions that I think are of pertinent interest.

The first question that arises is, What is a pathologic septum? Last year there was an article in the *Journal of the American Medical Association* by a physician living in a town of about 25,000 inhabitants who said, if I recall correctly, that he had done 125 submucous resections in one year. If that is true, he must have had an extraordinary practice. What is a pathologic septum? Some men will take any little deviation and resort to submucous resection of the nasal septum. I have seen cases frequently that have been advised to undergo submucous resection when there was little or practically no pathological obstruction. A pathologic septum is one that produces more or less complete obstruction, so that it interferes with the breathing of the patient or is instrumental in causing some deafness on that side from lack of proper aeration of the middle ear. It may cause more or less obstruction by damming up the secretions, what we call catarrhal secretions, in the nasopharynx, and there are some reflex disorders which may be ascribed to this. But there is one thing certain, and that is I do not believe in my experience I have seen an absolutely straight septum. Zuckerkandl says that 75 per cent of them are deviated more or less. I believe that 100 per cent are deviated more or less. It is a developmental irregularity. Nature may have intended it to be straight. Perhaps nature did not intend to have so many appendices removed, but I think perhaps nature is misguided in some instances. Judging from the pictures shown by Dr. Wood, I would not consider that a case of pathologic septum. I

am sure I would not do an operation on a case of that kind.

Dr. Wood spoke of the Bosworth method of sawing off the projection. That is practically out of date, because it produces an ulcer that almost never heals, and it really produces more traumatism than does submucous resection. Most of the obstruction is cartilaginous, although we may have to go back and take away the bony deviation.

As to the operative technic, Dr. Wood spoke of making a long incision primarily, saying that this is very necessary. I agree with him. If you make a small incision, you must enlarge it afterward. Anesthesia is very important. I prefer the method of rubbing cocaine crystals into the mucous membrane, as by so doing you use less cocaine, and the patient does not get any cocaine down his throat, which may produce more or less toxic symptoms. After that I always inject one per cent novocain solution at the anterior inferior border of the septum and elevate the muco-perichondrium through that. Most of the failures have come from a failure to elevate the perichondrium. If we do that we have no difficulty in stripping the membrane, but if we do not get down under the perichondrium we may have perforation as a result. Again, this operation is not free from danger. Several cases of meningitis with fatal outcome, having resulted from infection following traumatism that conveys it, have been reported, or are known of. More or less traumatism is inflicted and the infection may go up through the cribriform plate of the ethmoid and produce meningitis.

DR. C. J. BROYLES, Johnson City: I wish to add my commendation to Dr. Wood's very excellent paper, as I feel that he has given us something that is really interesting and quite instructive. I will not take the time of this association to speak about the different causes and the various degrees of deviation of the septum. I would take issue with Dr. McKinney with reference to the extent of these deflections that should be corrected. From the drawings Dr. Wood had before us, I take it to be a considerable degree of deflection. Dr. McKinney says these minor degrees should not be noticed. That is true, provided there are two equal nostrils, neither one of which is very much abbreviated, for if there is any inequality in the nostrils nature tries to remove it by enlarging the lower turbinate on that side and the middle turbinate as well. Nature demands that the two sides of the nostrils be equal, and any inequality will bring about trouble in the throat and the middle ear. Therefore, I believe any septum should be corrected that is leaving the nostrils unequal and producing these conditions in the throat and middle ear.

I want to say a word or two about the anesthetic. I believe the injection of cocaine is dan-

gerous. I have seen several cases, probably through an idiosyncrasy, who were very susceptible to the use of the drug. I have likewise seen rather alarming cases of poisoning. Therefore, I have abandoned the use of it, excepting applying small crystals to the area of the mucous membrane. It is not absorbed so readily or rapidly and the patient does not become poisoned like he would with a weak solution injected under the mucosa. Therefore, years ago, after an experience of that kind, I abandoned the use of injection of cocaine under the mucous membrane and depend entirely now on 1 to 400 novocain solution. It is apparently non-poisonous. I have never seen a patient poisoned, or in any way greatly affected by it, but I have seen some quickening of the heart at the beginning of the use of it.

DR. WOOD: How do you use it?

DR. BROYLES: I inject it under the mucous membrane. It is entirely satisfactory. It is almost painless if you give plenty of time for the injection. You should wait a little. You can spend a good deal of time in washing the throat or in allowing the patient to wait until you get its action. I remove the cartilage with a swivel knife, and the bony parts with heavy forceps, and if the deviation is low down to the floor of the nostril the chisel will do.

DR. J. McCHESNEY HOGSHEAD, Chattanooga: In reference to the use of the anesthetic, it is one of the most important things in this line of work. For the past two years I have been using novocain and like it far better than cocaine. The operation is not so hard if you get the patient thoroughly anesthetized and can control hemorrhage. The best way to do that in my experience is to rub a solution of cocaine (4 per cent) to begin with over the mucous membrane on either side, then inject with a hypodermic syringe the solution in four places at the anterior portion of the middle turbinate, and at the upper part, the fore parts in which you inject one c. c. at each time. This novocain solution in adrenalin gives you perfect anesthesia, enabling you to dissect up the mucous membrane or the perichondrium from the cartilage. One important feature is that you must be sure to break up adhesions. If you do not, the adhesions will act very much like pyogenic-membrane, and as Dr. Crile said last night, we would have shock. After the removal of the cartilage I have noticed many cases in which there were recurrent attacks of frontal sinus trouble, and also cases of catarrhal conjunctivitis and blepharitis marginalis after submucous resection has been made.

The probable duration of the local anesthesia is from 3 to 5 minutes. I apply it a second time if necessary. You inject it under the perichondrium, then you dissect up and the operation is easy when you have done your dissection. You

can go through with speculum and take the blades of the long speculum and go on either side very easily.

DR. C. B. WYLIE, Chattanooga: This is by far the most important operation in intranasal surgery, and it has given us better results than anything we have heretofore attempted or adopted. It has proven of great advantage, and if the operation is properly done, under favorable circumstances we sacrifice no tissue that should remain.

The doctor from Memphis (Dr. McKinney) spoke of the degree of deflection which really calls for operative procedure. It is not always the deflection of the septum alone that calls for an operation. We may have enlargement of the turbinated bone and have deformity or a lack of symmetry of the lateral wall. It is not an easy matter to correct the condition of the lateral wall without removal of the turbinated bone, and the turbinated bone from a functional standpoint is much more important than the septum. I have been doing this operation for five or six years, and it has been my experience that the cases calling for this operation do not mean always that the deflection should be so great as to press upon the turbinated bone on one side of the lateral wall, but it may approach that to such an extent as to interfere with the air passages, and thus destroy the function of syphoning mucous from the sinuses.

I have had a peculiar experience recently in work on the septum, one where the septum was unusually thick, and on removing it there were large cells within the bony septum, which was quite 10 or 12 millimeters in width. When you add to that a bony wall with the periosteum and mucous membrane you have some idea of the case I had to deal with. It is the only case I ever heard of.

There is one point in technique where I differ from Dr. Wood, and that is in regard to the incision through the cartilage. I make it four or five millimeters either anterior or posterior to the initial incision, so that should I perforate the mucous membrane of the opposite side while cutting through the cartilage, there will be no perforation of the septum after healing, as the two perforations are not opposite each other. I think this an advantage many times, for it does not matter how ambidextrous we are with the knife, we are liable to have a slip.

DR. T. HUGH CARTER, Memphis: I would like to ask the author of the paper whether he has ever seen or had a case of death following cocaine anesthesia. I think there is a great danger attending the use of cocaine anesthesia, and there is a great deal of shock following it. Personally, I have never seen or heard of a death following the use of cocaine.

DR. J. P. CRAWFORD, Nashville: One diffi-

culty I have met with can be overcome in this way: In making the preliminary incision for resection, in dissecting off the mucous membrane occasionally one will endeavor to resect it and fail and find that the mucous membrane has grown in on that side. If you dissect through the cartilage and first resect the other side of the mucous membrane, you get along very much better and may not have to abandon an otherwise easy operation as mutilation on original side.

As to the degree of deflection, the man himself must judge whether it is sufficient to warrant an operation or not.

In reference to anesthesia, in the past three or four years I have been accustomed in this work of resection of the nasal septum to use a spray of a solution of quinine and urea, and afterwards use powdered cocaine rubbed over the surface, and that unquestionably makes it safer. The quinine and urea is a stimulant rather than a depressant, and if cocaine is rubbed over the mucous membrane, then I have not used a solution stronger than 1 per cent. In my own work, the quinine and urea has been satisfactory in all these cases. The after-effects of the quinine and urea are prolonged much more, and the patient is much more comfortable for two or three days after the anesthesia, and although it is claimed by some it interferes with the healing process, it has not proven so in my own work.

DR. J. W. MOORE, Nashville: The greatest objection raised against the subject of resection of the nasal septum for the relief of deflections has been that frequently perforation results from it and it is therefore a question of importance how the initial incision is made, and particularly the incision through the cartilage. In my cases of resection I have followed this method: I have a knife that is semi-circular, set at right angles to the shaft, near the tip, whose depth is about the average thickness of the septum or slightly less, and by making an incision with that knife placed at right angles to the shaft, it acts as a stop. It does not press hard against the opposite mucous membrane; the softness permits it being pushed out of the way where it passes through the cartilage. By the use of this method many perforations may be avoided.

In regard to the after-treatment of cases of submucous resection, I have found it very valuable to saturate the packing with liquor alumini aceto-tartratis. When the gauze is saturated with this solution it will not be injurious to any degree to the mucous membrane. It can be allowed to remain for a while without causing any irritation, at the same time it is quite antiseptic and has an astringent value. When you remove it, in some cases 24 hours and in others 48 hours after the operation, there will be no odor, and it will come away readily.

DR. WOOD (closing the discussion): Dr. Mc-

Kinney is eminently correct that every septum not mathematically straight, does not need submucous resection, but only those septa which produce symptoms call for an operation.

I am very much obliged to Dr. Broyles for bringing out the values of novocain as an anesthetic. Cocaine is not an unmixed blessing, as we know. Certainly, I know it from a recent death I had under cocaine anesthesia. Dr. Carter asked if anybody had a death from this anesthetic. I had one recently, I am sorry to report, but not after submucous resection, but nevertheless from cocaine.

Dr. Crawford brought out the question of quinine and urea anesthesia. We know that the after-pain following submucous resection is disagreeable for the first twenty-four hours. I am very glad he has given us the benefit of his experience in the use of quinine and urea as an anesthesia. Frankly, I have never used it. I have been afraid of it, but perhaps this fear was the result of my ignorance. At any rate, I have never used it. I am glad to hear that the doctor reports so favorably on it, and I shall certainly try it hereafter.

INTRA-CRANIAL HEMORRHAGE.*

By Robert Mann, M.D.,
Memphis, Tenn.

Intra-cranial surgery is undertaken for the relief of hemorrhage within the skull more often than for all other conditions affecting this mysterious zone combined. Therefore, my topic is a common one, so also is its importance equally noteworthy.

The uncertainty attending hemorrhage of the brain adds interest to its phenomena, for an apparently serious case proves to be trivial, and, on the other hand, a trivial one proves to be serious more frequently in this condition than probably any calling for surgical interference.

The general classification of intra-cranial hemorrhage into extra-dural, sub-dural, and intra-cerebral is important, and is adequate for all primary surgical procedures. Other classifications are secondary, and can only be recognized after the skull and dura have been opened, and then they are dealt with in no particular different way.

While trauma plays the principal role in

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the extra and sub-dural types, there is generally a more intricate and subtle factor to be dealt with in the intra-cerebral form such as the rupturing of delicate neoplastic vessels or aneurismal dilatations, the disintegration of supporting peri-arterial structure and arterio-sclerosis with its attending high blood pressure.

All intra-cranial hemorrhagic phenomena are based on pressure and anemia, except the severe traumatism, which may result from the rupturing of a high-tension blood vessel in the delicate brain substance.

Any form of intra-cranial hemorrhage may be localized and any form may also become diffused or general by the rupturing of the membranes, and the blood flowing into the brain chambers containing the cerebro-spinal fluid, and thence down into the fluid of the cord. Particularly is this apt to occur in fractures of the base, as the dura adheres closely to the bone in this region. It is also at the base that the arachnoid spans the largest cisterns, and in this way predisposes to tearing of its structure. This allows the blood to mix freely with the cerebro-spinal fluid, which tends to prevent clot formation, so that the bleeding from the ruptured vessels in these cases is not generally stopped until the intra-cranial pressure equals that of the blood, and when this is attained, the vital centers of circulation and respiration suffer an anemia, which, unless rapidly relieved, means certain death.

Extra dural hemorrhages are localized unless there is a tear in the dura matter. Hemorrhages that have diffused freely between the dura and arachnoid, with even a small rent in the arachnoid, act similar to large extra dural clots, and require practically the same interference.

The most disastrous form of intra-cranial hemorrhage is where an intra-cerebral vessel has ruptured freely into the ventricles, or a free flow of blood has entered into the basal cisterns, which means rapid and severe pressure, with anemia of the medulla and destruction of the functions of its important centers.

The characteristic symptomatic manifestations in any form of intra-cranial hemorrhage will depend upon the location and the

amount. Small circumscribed hemorrhages can usually be located, except where situated over a silent area, causing no manifest disturbance, or in the bulbar region, and causing symptoms of general pressure.

Large circumscribed hemorrhages may cause distinct focal symptoms at first, and later exert pressure sufficient to produce anemia of the brain stem with its characteristic slow pulse, high blood pressure, irregular breathing, etc., but by carefully comparing the extent of the disturbance on both sides of the body, the location of the clot can usually be ascertained after the pressure has become general.

We know that slight pressure from a clot or depressed fracture may cause serious and sometimes irreparable damage to the brain substance or some of its important functions. We also know that a force may be transmitted through the brain in some way and cause damage in the opposite portion. The brain is a delicate semi-solid, and the sub-dural vessels have no tenacious adventitia. Both can be seriously damaged by a slight friction rub with gauze, or instrumental manipulation. The opening of the skull demands the most serious consideration of the delicacy of structure and function of the organs contained therein. The function of many localized areas of the brain has been definitely determined. Clot pressure with its resultant anemia over any particular area destroys its activity, hence we can in many cases locate the clot by the loss of function of some particular member of the body.

It is advisable to open the skull directly over the clot, but it is by no means imperative, as the bone can be rongenred away or a smooth spatula passed carefully in different directions and the clot located. The intra-cranial pressure will assist in its removal, and sometimes cause it to be extruded, particularly is this true in the intra-cerebral form.

If the focal symptoms are not sufficiently marked to locate the clot, and general pressure symptoms prevail, a decompression operation is indicated, best performed low down in the center of the temporal fossa, by first splitting the temporal muscle, which will sub-

sequently serve to protect the underlying brain. It is in this location that the main stem of the middle meningeal artery will generally be found, and also through such an opening the base of the middle fossa (the most likely location of the trouble) is most accessible.

By gently elevating the temporal lobes the bloody cerebro-spinal fluid may be evacuated. If bleeding continues, rubber wicks should be introduced and brought out through the incision. If, after operating in this manner, upon one side, the pressure symptoms are not relieved, a similar operation on the opposite side should be performed.

The after-treatment consists of the application of an ice-cap, supportive and symptomatic procedures. The outcome of these cases is not always gratifying, but operative methods offer the best at our disposal.

In writing this paper, I was impressed with my hopelessness to cover my subject, only in a brief way. But often we are aroused to think of interesting details by being reminded of generalities.

DISCUSSION.

DR. PAUL F. EVE, Nashville: I do not think that this subject should go without discussion. There are two fields in modern surgery that are more important today than they ever have been. They are the field of brain surgery and of bone surgery. The results in these two fields have been marvelous, and sometimes we wonder whether the achievements can be true or not, but we see them with our eyes, and are greatly impressed with the things that are accomplished and which we have never seen before.

The question of intra-cerebral hemorrhage or other hemorrhage, whether extradural or subdural, is one of the most interesting subjects that can be brought before any society, and I feel that many a life has been lost, not only by delay in operating, but by non-surgical interference. There is a time when the surgeon should act promptly, and there is also a time when the surgeon should wait for results. We know a large number of the areas of the brain and are able to locate hemorrhage resulting in any of these areas with precision and by the trephine and removal of the clots save many a patient's life; but, unfortunately, there are some hemorrhages in the cerebrum which we are unable to do anything with. There are some cases, even when an operation has been performed, we are unable to arrest the hemorrhage, and one such case I had

some months ago. I will call attention to this case.

The patient was hit in the parieto-temporal region with a hand-bar. He did not lose consciousness for half an hour, nor did I see the patient until three-quarters of an hour after the accident. When he was brought to the infirmary he was in a semi-conscious condition, and for a time no symptoms developed. The patient seemed to rally, and I thought that the best thing that could be done, and the consultants agreed with me, was to wait for symptoms. For ten hours he seemed to grow better and better, when all of a sudden he became unconscious. There was a large area of swelling upon the right side, and also a swelling upon the left side. The swelling upon the right side was much larger than that upon the left side. No symptoms of paralysis presented themselves. There was no twitching of the muscles whatever. Finally, at the end of the twelfth hour we thought the best thing to do was to perform a lumbar puncture to clear up our diagnosis. The fluid drawn off was perfectly clear. It was not bloody at all. Following this puncture no results followed, and after the family physician was called in, it was determined that a trephine operation be performed. Upon the area of the temporo-parietal region we found a fracture of great extent. It was a stellate fracture, running not only through the temporal bone and into the parietal, but also into the frontal bone. A portion of the skull was trephined, the bone elevated, and a considerable amount of hemorrhage was present. The middle meningeal artery was caught and ligated on both sides. An enlarged incision was made into the already torn dura to arrest hemorrhage, which, however, still continued; gauze packs were introduced and every means used to prevent bleeding, but it still persisted, the patient finally dying about 26 hours after the receipt of the injury.

DR. E. A. THAYER, Mobile, Ala., spoke of a group of cases for the practical negative value, his remarks being illustrated by blackboard diagrams, and said that in this group of cases the surgeon was justified in doing nothing, although it was advisable to recognize them early.

DR. MANN (closing the discussion): I want to thank Dr. Eve and Dr. Thayer for their discussion, and particularly Dr. Thayer for extending my ideas a little.

With reference to the case reported by Dr. Eve, there is danger of putting off operation too long. The intense pressure is apt to cause irreparable damage to the centers of respiration and circulation. They will have become so damaged that the shock of the operation will be apt to terminate the life of the patients.

As to lumbar puncture, there is great danger in it in these cases. The balance of pressure is

kept up by the cerebrospinal fluid, the fluid in the cord, and the fluid in the brain. If you withdraw the fluid in the cord, the pressure is imbalanced and the brain is apt to be pushed down into the foramen magnum with resulting sudden death.

PAROXYSMAL TACHYCARDIA.*

F. J. Runyon, M.D.,
Clarksville, Tenn.

It seems to me very strange that a disorder presenting such marked features as paroxysmal tachycardia should escape description until as late as 1876 when it was first described by Cotton. The term essential paroxysmal tachycardia has been, in my opinion, wisely objected to as the condition. Paroxysmal tachycardia is now and then a superadded or complicating complication not only for other than heart diseases, but also of other heart disorders. Herein, too, it is liable to present most sudden, alarming and unexpected complications. For instance, an experienced nurse with a patient of mine living some miles away 'phoned me that my patient was dying and could not possibly survive until I arrived. As I had to wait for a train and was delayed some time I had several such messages before I reached the bedside of my patient. To begin with, the patient was very old and feeble and was already suffering from mental feebleness and intestinal indigestion, and on seeing the patient I felt that the nurse's fears had been fully justified. My patient recovered.

Since the title of this paper was announced I have had another such case. A woman, aged sixty years, has been subject to heart attacks for twenty years, so she tells me. For a long time a glass of cold water would arrest the paroxysm. Of late years this would not suffice and other means had to be resorted to. I tried various means as preventives, but accomplished nothing till on one occasion her anaemia so impressed me I put her upon iron manganese and arsenic. She had done splendidly upon this for months repeatedly telling me she believed I had at

last cured her. But about the middle of March she had quite an acute attack of grip during which digestion was much upset, vomiting and diarrhoea being a feature. On the fourth day she had an attack of paroxysmal tachycardia. For a while her pulse was most alarming, being irregular in time and force. I gave her morphine and strychnine hypodermically. Following this for a brief period I could detect no pulse at the wrist and I was much alarmed about her. Then the magic change came and her pulse became regular, of good volume and eighty per minute.

This recalls my first case. A woman of about forty-six repeatedly told me she suffered from heart trouble. As physical examination revealed nothing to indicate it I had grown skeptical of her contention. Finally I was called and found her in bed, features showing anxiety and she complained of oppression in her chest. That was fifteen years ago. I found her pulse two hundred and four to two hundred and eight as near as I could count it and fairly distinct at the wrist. Her condition was alarming to me, as I felt she might die at any time. During the four days and nights that this continued I tried several things, digitalis, aconite, bromides, nitro-glycerine, strychnine. Nothing had the slightest influence so far as I could judge. Finally in sheer desperation I gave a hypodermic of strychnine and morphine. Watching the result I was in a little while much alarmed to note that the pulse at the wrist became uncertain, irregular, disappearing and then perfectly regular and of good volume and normal rate. I had never seen the treatment recommended, and as in this and in other cases it has never failed in my hands to give just such a result I am at a loss to understand why Babcock, Cabot, Dieulafoy, Strumpell and others say, as a rule, no treatment seems to have any effect on the paroxysm. My experience with it must have been peculiarly fortunate or theirs unfortunate if they gave it a trial. I have given it repeatedly in recurring attacks in the same individual and without disappointment. Of course, this should be given judiciously and not for every paroxysm, bearing in mind on the one hand the ultimate possi-

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bilities of the treatment and on the other the spontaneous tendency of this disorder to abrupt termination.

Between paroxysms I have nothing to advise more than a most painstaking examination of the patient, a close scrutiny of the habits, diet, etc., and a careful effort to correct any defect in body, irregularity in habit or any error in diet. While occasionally successful to a great extent I fear we will still have many failures.

I have one patient, a young woman of 39, who has had three attacks only, all occurring during pregnancy. She has five children. Seven years ago when about four months pregnant she had her first attack and shortly thereafter another. No other occurred till five years ago when about four months advanced in gestation the third attack occurred. This was her last to date and she continues in fine health. So of her three attacks, two occurred during her fourth pregnancy and one during the fifth. In view of the supposed hyperactivity of the thyroid at such times I had thought of this being causative. Yet I feel doubtful of this. Dr. Markoe (1) of the New York lying-in hospital reporting a series of cases of pregnant women with goiters stated that he could not see that pregnancy was influenced one way or another by the goiter, and as he did not mention paroxysmal tachycardia, I judge that was not a feature of these cases.

While the majority of Herrington's cases were males, all my cases (four) have been women.

The pathology is unsettled. It is most probably a neurosis. Post mortem findings have been uncertain and variable, though Osler in his latest work states that the trouble is due to an irritable focus in the cardiac musculature. He further states that in many cases it may be due to a slight or transient ischaemia from a sclerosed vessel or one whose muscle is liable to spasm. Osler divides the cases of Paroxysmal Tachycardia into auricular, nodal and ventricular. Quoting from Lea, he further states: "A hyperexcitability of some focus in the cardiac musculature as the direct exciting cause of Paroxysmal Tachycardia is a probable explanation of its production. The degree of response to stimulation depends not

only on the intensity of the stimulus, but also upon the excitability of the tissue itself. In the known increased excitability of the auricle as compared to the ventricle may possibly be found an explanation of the increased frequency of auricular over other forms of tachycardia."

The definition given of Paroxysmal Tachycardia as being a rapid acting heart of sudden onset and abrupt termination, the heart beating at least 160 or more times per minute up to possibly 300 times, as a rule occurring in subjects with no demonstrable heart lesion, has been comprehensive as far as my cases are concerned. Yet I have never witnessed the abrupt termination except from the use of the hypodermic above mentioned.

It should be mentioned that spontaneous cures occur in many of these cases. While an individual attack, as a rule, terminates favorably and the danger from such is surprisingly small, it may be stated as an axiom that no such marked variation from the normal action of this important organ is possible without an element of danger. Several deaths have been reported from this affection and other cases in which there occurred marked congestion of the lungs, dilatation of the heart, haemophthisis, congestion of the liver, suppression of urine. At the end of the crisis these symptoms rapidly disappear.

Strumpell's contention that at the cessation of the paroxysm of tachycardia the pulse usually sinks to exactly one-half its previous rate I have not noted.

I have not been able to follow any case to its ultimate end, as one case died of chronic intestinal indigestion, another moved out of the community, but I recently learned is still living. Two others are under occasional observation, the one during attacks, the other having ceased to have trouble since her last pregnancy five years ago.

Addendum.

Since the completion of this paper I have seen one of my patients in another attack of Paroxysmal Tachycardia. This was the night of April 1. She was sitting up, and to look at her casually nothing unusual would be suspected. Yet the heart was beating at the rate of 204 to 208, impulse feeble but regular.

Gave nitroglycerine one one-hundredth grain. I then had her try the deep breathing with fixation of chest wall as some advise. Heart rate increased to about 236. Could not be counted at wrist and volume alarming. I left the room and had her retire. On my return I found pulse of fair volume, 94 to 96 per minute. She is of very nervous diathesis and had been the subject of occasional attacks of asthma for many years. She states she can often foretell an attack. Preceding it she feels for some time nervous and anxious. At times she says during an attack she has severe pain in left arm. Following an attack she states her arm burns as if it had been wrapped in mustard. She thinks fatigue causative and I think this renders those subject to such attacks more liable to them as do also digestive disturbances.

It may ultimately be found that these attacks are precipitated by a change in the chemistry of the blood, thus causing a change in the condition of the nerves, probably the removal of some quieting substance.

For instance, the knowledge that the withdrawal of calcium from a nerve cell, leaving a relative excess of sodium and of potassium renders the cell hyperexcitable, suggests the possible value of calcium salts in paroxysmal tachycardia. Acting upon this theory I propose to give lime salts a trial.

DISCUSSION.

DR. JOHN A. WITHERSPOON, Nashville: I dislike to see such a valuable paper as this go without discussion. These cases occur in the practice of every physician. Attacks of tachycardia and bradycardia are always difficult to understand. My own experience has been that these paroxysmal attacks are usually neurotic. We all know that the nerves of the sympathetic system are the accelerators of the heart, while those of the pneumogastric are the inhibitors. In these cases referred to by Dr. Runyon coming on by air hunger, sometimes with terrific dyspnea, with a very rapid heart, sometimes with marked arrhythmia, it has always occurred to me the deficiency or difficulty is not in the heart itself, although it may be influenced by the solar or semilunar plexus. Before jumping to a conclusion it is absolutely necessary that we should differentiate between the possibilities of a neurosis and a chronic myocarditis. If you have an atheromatous change in the cardiac arteries, you may have a local ischemia, a local point, if you

please, in which the cardiac muscle is deficiently supplied with blood and produces a condition of a dangerous character. In patients who die with tachycardia their cases are associated with coronary atheroma. We must eliminate the possibilities of exophthalmic goiter. We all know how frequently this is true. It is possible some of these cases may be due to defective action in some of these ductless glands that supply the metabolic functions of the body. We know that it is a bad precedent to start out and advise these patients to the effect that there is no danger in these paroxysmal attacks of tachycardia. I have lost two patients. I found out afterwards by post-mortem examination that they had marked atheroma of the coronaries.

If we remember the remarks made by Dr. Runyon, strychnia and morphine were the remedies used. If you give them bromides and belladonna the majority of them are made worse by it. I have yet to see one of them improved by these remedies, but I have seen morphine and atropia do good, and if morphine and strychnia are to be given, I should advise that the diagnosis be made and the prognosis especially guarded by taking the blood pressure and looking thoroughly into the possibilities of a myocarditis. If you can eliminate myocarditis, you are more than likely able to eliminate exophthalmic goiter; you are likely to meet with a neurosis of the heart. In that way there is not so much danger.

It is strange that these cases reported by Dr. Runyon should occur in pregnancy each time. That has not been my observation. The cases of tachycardia I have seen have developed after the menopause. They are far more common in women than in men. They are common in the menopause and the nervous phenomena that develop with it are sufficient to make the differentiation.

DR. W. B. ST. JOHN, Bristol: I want to thank Dr. Runyon for his interesting paper and to suggest the idea that sometimes these cases are the result of gastrointestinal intoxication, producing a toxin which is selective in its action and which affects the vagus. I have seen several such cases that I can recall, and as it is a most common condition in pregnancy it would suggest the idea that was the cause of it.

Constipation being an ordinary accompaniment of pregnancy, we know that intestinal toxemia results from excessive bacterial action and diminished elimination of toxins in the intestines and this is dependent upon stasis of the intestinal contents.

DR. RUNYON (closing the discussion): Dr. St. John has stated that many of these cases may be due to autointoxication and that may explain the occurrence of the tachycardia during pregnancy.

DR. WITHERSPOON: I would like to ask Dr.

Runyon whether he does not think the toxemias which influence the vagus produce various attacks of bradychardia rather than tachycardia?

DR. W. K. SHEDDAN, Williamsburg: I would like to ask Dr. Runyon whether these patients were not constipated in their habits and consumed large quantities of proteids?

DR. RUNYON: One case suffered constantly from diarrhea, was put on a very restricted diet, although that diet consisted largely of beef juice. She was the oldest patient I had. Only one of my cases of paroxysmal tachycardia occurred in pregnancy, but that woman had had three attacks only, all three occurring during pregnancy. She is the mother of five children. During her fourth pregnancy she had two attacks along about the fourth or fifth month. During her last pregnancy she had one attack which occurred on the way from church one Sunday. She was near my office and came in to see me at once and was there given treatment. The first case I had I watched closely for days. I had never seen at that time any reference to the use of morphia in such cases, and I was afraid to use it. I finally did use it, and to my great surprise in about thirty minutes' time the heart dropped to about the normal rate. Referring again to the case sick in my office I will state that she was terribly distressed and frightened, having the air hunger that Dr. Witherspoon has referred to. A hypodermic injection stopped the rapid heart action within thirty minutes.

So far as constipation is concerned, I do not recall anything definite about that, but in treating the cases and in trying to prevent a recurrence, I have had that in mind, and have tried to overcome that feature. The case under treatment now is inclined to be constipated. As to the case I treated years ago I do not recall about the constipation, nor do I recall anything special about the diet except I tried to have them take as simple a diet as possible.

With reference to the question asked by Dr. Witherspoon, I shall have to get around it by dodging because I do not know whether bradycardia or tachycardia is the oftener produced by these toxæmias referred to. I have seen the toxins produce such results, that is, a slow action of the heart he refers to, and yet I have seen a rapid heart action as well which I thought was due to toxemia. I would rather have his opinion on that phase of the subject than my own.

VITAL STATISTICS BILL.

Chapter No. 30, Senate Bill No. 294.

(Public Acts.)

An Act to provide an effective system for the keeping of all births and deaths in Tennessee; and to provide penalties for the violation of this Act.

Be it enacted by the General Assembly of the State of Tennessee.

Section 1. That the State Board of Health

shall have charge of the registration of births and deaths; shall prepare the necessary instructions, forms and blanks for obtaining and preserving such records, and shall insure the faithful registration of the same in each primary registration district as constituted in Section 3 of this Act, and in the Central Bureau of Vital Statistics at the Capital of the State. The said Board shall be charged with the uniform and thorough enforcement of the law throughout the State, and shall from time to time promulgate any additional forms and amendments that may be necessary for this purpose.

Section 2. That the Central Bureau of Vital Statistics shall be under the general charge and supervision of the Secretary of the State Board of Health, and under immediate direction of an assistant who shall be known as the Assistant Secretary of the State Board of Health, and Registrar of Vital Statistics, and who shall be a graduated medical practitioner of not less than three years practice in his profession, and a competent Vital Statistician and shall perform the duties herein prescribed, and in addition thereto those duties now performed by the Assistant Secretary of the State Board of Health, as now constituted. The Assistant Secretary and Registrar of Vital Statistics shall be appointed by the State Board of Health. He shall hold office for a period of five years from the date of his appointment. Should a vacancy occur, the position shall be filled for the unexpired term, as in the manner previously prescribed.

Said Assistant Secretary and Registrar of Vital Statistics shall receive as compensation for his services the sum of \$3,000.00 per annum, payable monthly from the date of his appointment on warrant of the Comptroller, as other salaries are paid. The State Board of Health shall provide for such clerical and other assistants as may be necessary for the purposes of this Act, who shall serve at the pleasure of the Board, and said Board shall fix the salary of persons thus employed within the amount appropriated therefor by the General Assembly.

Suitable apartments shall be provided by the State Board of Health for the Bureau of

Vital Statistics, which shall be properly

equipped for the permanent and safe preservation of all official records made and returned under this Act. The sum of \$8,000.00 be and the same is hereby appropriated annually out of any moneys in the Treasury of the State for the purpose of paying said salaries and other expenditures made in pursuance of the provisions of this Act.

Section 3. That for the purpose of this Act the State shall be divided into registration districts as follows: Each city, incorporated town and civil district shall constitute a primary registration district. Provided, that the State Registrar may combine two or more primary districts into one primary registration district.

Section 4. That within ninety days after the taking effect of this Act, or as soon thereafter as possible the State Registrar shall appoint a local Registrar of Vital Statistics for each registration district in the State.

The term of office of the local Registrar shall be for four years, beginning with the first day of January of the year in which this Act shall take effect, and until their successors are appointed and qualified.

Provided further, that in cities where health officers or other officials are conducting effective registration of births and deaths under local ordinances at the time this Act goes into effect, such officials may be appointed as Registrars in and for such cities, and they shall be subject to the rules and regulations of the State Registrar, and to all the provisions of this Act. Any local Registrar appointed by said Board who fails or neglects to discharge efficiently the duties of his office as provided in this Act, or who fails to make prompt and complete returns of births and deaths, as required hereby shall be removed from office by the State Registrar, and his successor appointed, and he shall be subject to all other penalties imposed under other sections of this Act.

Each local Registrar appointed under the provisions of this Act, shall, immediately upon accepting the appointment, appoint a deputy, who shall perform the duties of local Registrar during his absence, illness or disability, said deputy shall in writing accept such appointment, and shall be subject to all rules and regulations and penalties governing local Registrars.

And when it may appear necessary for the convenience of the people in any rural district, the local Registrar is hereby authorized with the approval of the State Registrar, to appoint one or more suitable persons to act as sub-registrars, who shall be authorized to receive certificates, and to issue burial or removal permits in and for such portions of the district as may be designated; and each sub-registrar shall note over his signature the date on which each certificate was filed, and shall forward all certificates to the local Registrar of the district within ten days, and in all cases before the third day of the following month, provided further, that all sub-registrars shall be subject to the supervision and control of the State Registrar, and may be by him removed for neglect or failure to perform their duties in accordance with the provisions of this Act or the rules and regulations of the State Registrar, and they shall be liable to the same penalties for neglect of duties as the local Registrar.

Section 5. That the body of any person whose death occurs in the State shall not be interred, deposited in a vault or tomb, cremated or otherwise disposed of, or removed from or into any registration district or be temporarily held pending further disposition more than seventy-two hours after death, until a permit for burial removal or other disposition thereof shall have been properly issued by the Registrar of the district in which the death occurred, and no such burial or removal permit shall be issued by any Registrar until a complete and satisfactory certificate of death has been filed with him as hereinafter provided for; and provided further that when a dead body is brought into a registration district in this State for burial or other disposition then the transit and removal permit, issued in accordance with the law and health regulations of the place where death occurred shall be accepted by the local Registrar of said district as a basis upon which he shall issue a local burial permit in the same way as if the death occurred in his district, he shall plainly enter upon the face of the permit the fact that it was a body shipped in for interment, and give the actual place of death; and provided further that a burial permit shall not be required from the

local Registrar of the district in which interment is made, when a body is removed for purposes of burial or other disposition from one district to another in this State.

Section 6. That still born children or those dead at birth shall be registered as births and also as deaths, and a certificate of both birth and death shall be filed with the local Registrar, in the usual form and manner, the certificate of birth to contain in place of the name of child the word "Still Birth," the medical certificate of the cause of death shall be signed by the attending physician, if any, and shall state the cause of death as "Still Born," with the cause of the still birth, if known, whether a premature birth, and, if born prematurely, the period of uterine gestation, in months, if known; and burial or removal permits in the usual form shall be required, mid-wives shall not sign certificates of death for still-born children, but such cases, and still births occurring without attendance of either physician or mid-wife, shall be treated as deaths without medical attendance as provided for in Section 8 of this Act, and provided further that a certificate of birth and death shall not be required for a child that has not advanced to the fifth month of utero-gestation.

Section 7. That the certificate of death shall be of the United States standard form as approved by the Bureau of the Census and shall contain the following items:

(1) Place of death, including state, county, civil district, incorporated town or city, if in a city, the ward, street and house number, if in a hospital or other institution, the name of the same to be given instead of the street and house number. If in an industrial camp, the name of the camp to be given.

(2) Full name of decedent. If an unnamed child, the surname preceded "unnamed."

(3) Sex.

(4) Color or race, as white, black (Negro or Negro descent), Indian, Chinese, Japanese, or other.

(5) Conjugal condition as single, married, widowed or divorced.

(6) Date of birth, including year, month and day.

(7) Age, in years, months and days. If less than one day the hours or minutes.

(8) Occupation. The occupation to be reported of any person who had any remunerative employment, women as well as men, stating (a) trade, profession, or particular kind of work, (b) general nature of industry, business or establishment in which employed (or employer).

(9) Birth place, state or foreign country.

(10) Name of father.

(11) Birthplace of father, state or foreign country.

(12) Maiden name of mother.

(13) Birthplace of mother, state or foreign country.

(14) Signature and address of informant.

(15) Official signature of the Registrar, with the date when certificate was filed, and registered number.

(16) Date of death, year, month and day.

(17) Statement of medical attendance of decedent, fact and time of death, time last seen alive, and the cause of death with contributory cause (secondary) or complications, if any, and duration of each and if attributed to dangerous or unsanitary conditions of employment; signature and address of physician or official making the medical certificate.

(18) Length of residence (for hospitals, institutions, transients or recent residents), at place of death and in the state.

(19) Place of burial or removal; date of burial.

(20) Signature and address of undertaker or person acting as such.

The personal and statistical particulars (Item 1 to 13) shall be authenticated by the signature of the informant, who may be any competent person acquainted with the facts.

The statement of facts relating to the disposition of the body shall be signed by the undertaker, or person acting as such.

The medical certificate shall be made and signed by the physician, if any, last in attendance on the deceased, who shall specify the time in attendance, the time he last saw the deceased alive, and the hour of the day at which death occurred. And he shall further state the cause of death, so as to show the course of disease or sequence of causes resulting in the death, giving first the name of the disease causing death (the primary

cause), and the contributory (secondary cause), if any, and the duration of each.

Indefinite and unsatisfactory terms, indicating only symptoms of disease, or conditions resulting from the disease, which will not be held sufficient for issuing a burial or removal permit; and any certificate containing only such terms as defined by the State Registrar shall be returned to the physician for correction and more definite statement.

Causes of death, which may be the result of disease or violence, shall be carefully defined; and, if from violence, the means of injury shall be stated, and whether (probably) accidental, suicidal, or homicidal. And in deaths in hospitals, institutions, or of non-residents, the physician shall furnish the information required under this head (Item 18), and may state where, in his opinion, the disease was contracted.

Section 8. That in case of any death occurring without medical attendance, it shall be the duty of the undertaker to notify the local Registrar of such death, and when so notified the Registrar shall inform the local Health Officer, and refer the case to him for immediate investigation and certification, prior to issuing the permit; provided, that when the local Health Officer is not a qualified physician, or when there is no such official, and in such cases only, the Registrar is authorized to make the certificate, and return from the statement of relatives, or other person having adequate knowledge of the facts; and provided further, that if the death was caused by unlawful or suspicious means, the Registrar shall then refer the case to the Coroner for his investigation and certification. And any Coroner whose duty it is to hold an inquest on the body of any deceased person, and to make the certificate of death required for a burial permit, shall state in his certificate the name of the disease causing death, or if from external causes, (1) the means of death; and (2) whether (probably) accidental, suicidal or homicidal; and shall in either case furnish such information as may be required by the State Registrar in order to properly classify the death.

Section 9. That the undertaker, or person acting as undertaker, shall be responsible for obtaining and filing the certificate of death

with the local Registrar of the district in which death occurred, and for securing a burial or removal permit, prior to any disposition of the body. He shall obtain the personal and statistical particulars required from the person best qualified to supply them, over the signature and address of his informant. He shall then present the certificate to the attending physician, if any, or to the Health Officer or Coroner, as directed by the local Registrar, for the medical certificate of the cause of death and other particulars necessary to complete the records, as specified in Section 7 and 8. And he shall then state the facts required relative to the date and place of burial over his signature, and with his address, and present the completed certificate to the local Registrar in order to obtain a permit for burial, removal or other disposition of the body. The undertaker shall deliver the burial permit to the sexton, or person in charge of the place of burial, before interring or otherwise disposing of the body; or shall attach the transit permit containing the corpse, when shipped by any transportation company; said permit to accompany the corpse to its destination, where, if within the State of Tennessee, it shall be delivered to the sexton, or to other person in charge of the place of burial.

Section 10. That if the interment or other disposition of the body is to be made within the State, the wording of the burial permit may be limited to a statement by the Registrar and over his signature that a satisfactory certificate of death having been filed with him as required by law, permission is granted to inter, remove, or otherwise dispose of the deceased, stating the name, age, sex, cause of death, and other necessary details upon the form prescribed by the State Registrar.

Section 11. That no sexton or person in charge of any premises in which interments are made, shall enter or permit the interment or other disposition of any body unless it is accompanied by a burial removal or transit permit, as herein provided. And each sexton or person in charge of any burial ground shall endorse upon the permit the date of interment, over his signature, and shall return all permits so endorsed to the

local Registrar of his district within ten days from the date of interment, or within the time fixed by the local Board of Health.

He shall also keep a record of all interments made in the premises under his charge, stating the name of the deceased person, place of death, date of burial, and name and address of the undertaker; which record shall at all times be open to public inspection.

Section 12. Undertakers or persons acting as such when burying a body in a cemetery or burial ground having no sexton or person in charge shall sign the burial or removal permit as sexton, giving the date of burial and shall write across the face of the permit the words, "No sexton in charge," and file the burial or removal permit within ten days with the Registrar of the district in which the cemetery is located. Every person, firm or corporation selling caskets, shall keep a record showing the name of the purchaser, purchaser's postoffice address, name of deceased, date and place of death of deceased. This record to be open to inspection of the State Registrar at all times. On the first day of each month the person, firm or corporation selling caskets shall report to the State Registrar each sale for the preceding month, on a blank provided for that purpose. Provided, however, no person, firm or corporation selling caskets only to dealers or undertakers shall be required to keep such record, nor shall such reports be required from undertakers when they have direct charge of the disposition of a dead body.

Every person, firm or corporation selling a casket at retail, and not having charge of the disposition of the body shall enclose within the casket a notice furnished by the State Registrar calling the attention of the purchaser to the requirements of the law, and the rules and regulations of the State Board of Health concerning the burial or other disposition of the dead body.

Section 13. That all births that occur in the State shall be immediately registered in the districts in which they occur, as hereinafter provided.

Section 14. That it shall be the duty of the attending physician or midwife to file a certificate of birth, properly and completely filled out, giving all the particulars required

by this Act, with the local Registrar of the district in which the birth occurred, within ten days after the date of birth. And if there be no attending physician or midwife, then it shall be the duty of the father or mother of the child, or the person in charge of a public or private institution in which the birth occurred, to notify the local Registrar, within ten days after the birth, of the fact that a birth has occurred. It shall then be the duty of the local Registrar to secure the necessary information and signature to make a proper certificate of birth.

Section 15. That the certificate of birth shall contain the following items:

(1) Place of birth, including state, county, civil district, incorporated town or city. If in a city, the ward, street and house number; if in a hospital or other institution, the name of the same to be given instead of the street and house number.

(2) Full name of child. If the child dies without a name, before the certificate is filed, enter the words 'died unnamed.' If the living child has not yet been named at the date of filing certificate of birth, the space for "full name of child" is to be left blank, to be filled out subsequently by a supplemental report as hereinafter provided.

(3) Sex of child.

(4) Whether a twin, triplet or other plural birth. A separate certificate shall be required for each child in case of plural birth, giving number of child in order of birth.

(5) Whether legitimate or illegitimate.

(6) Full name of father except for illegitimate children.

(7) Residence of father.

(8) Color or race of father.

(9) Birthplace of father: state or foreign country.

(10) Age of father at last birthday, in years.

(11) Occupation of father.

(12) Maiden name of mother.

(13) Residence of mother.

(14) Color or race of mother.

(15) Birthplace of mother; state or foreign country.

(16) Age of mother at last birthday, in years.

(17) Occupation of mother.

(18) Number of child of this mother, and or dead at birth. This certificate shall be number of children of this mother now living.

(19) Born at full term.

(20) The certificate of attending physician or midwife as to attendance at birth, including statement of year, month, day and hour of birth, and whether the child was alive signed by the attending physician or midwife, with the date of signature and address; if there is no physician or midwife in attendance, then the father or mother of the child, household or owner of the premises, or manager or superintendent of the public or private institution, or other competent person, whose duty it shall be to notify the local Registrar of such birth, as required by Section 13 of this Act.

(21) Exact date of filing in office of local Registrar, attested by his official signature, and registered number of birth, as hereinafter provided.

All certificates, either of births or deaths, shall be written legibly in unfading ink, and no certificate shall be held to be complete and correct that does not supply all of the items of information called for herein or satisfactorily account for their omission.

Section 16. That when a certificate of birth of a living child is presented without the statement of the given name, then the local Registrar shall make out and deliver to the parents of the child a special blank for the supplemental report of the given name of the child which shall be filled out as directed, and returned to the local Registrar as soon as the child shall have been named.

Section 17. That all superintendents or managers, or other persons in charge of hospitals, alms houses, lying-in- or other institutions, public or private, to which persons resort for treatment of diseases, confinement, or are committed by process of law, are hereby required to make a record of all the personal and statistical particulars relative to the inmates in their institutions at the date of approval of this Act, that are required in the forms of certificates provided for by this Act, as directed by the State Registrar; and thereafter such record shall be, by them, made for all future inmates at the time of their admission. And in case of persons ad-

mitted or committed for medical treatment of disease, the physician in charge shall specify for entry in the record, the nature of the disease, and where, in his opinion, it was contracted.

The personal particulars and information required by this Section shall be secured in as complete a manner as possible from relatives, friends or other persons acquainted with the facts.

Section 18. That the State Registrar shall prepare, print and supply to all Registrars all blanks and forms used in registering, recording and preserving the returns, or in otherwise carrying out the purposes of this Act; and shall prepare and issue such detailed instructions, as may be required to secure the uniform observance of its provisions and maintenance of a perfect system of registration. And no other blanks shall be used than those supplied by the State Registrar. He shall carefully examine the certificates received monthly from the local Registrars, and if any such are incomplete or unsatisfactory he shall require such further information to be furnished as may be necessary to make the record complete and satisfactory.

And all physicians, midwives, informants or undertakers, and all other persons having knowledge of the facts, are hereby required to furnish such information as they may possess regarding any birth or death upon demand of the State Registrar, in person, by mail or through the local Registrar. He shall further arrange, bind and permanently preserve the certificates in a systematic manner and shall prepare and maintain a comprehensive and continuous card index of all births and deaths registered; the cards to show the name of child or deceased, place and date of birth or death, number of certificate and the volume in which it is contained.

He shall inform all Registrars what diseases are to be considered as infectious, contagious, or communicable and dangerous to the public health, as decided by the State Board of Health, in order that when deaths occur from such diseases proper precautions may be taken to prevent the spreading of dangerous diseases.

Section 19. That it shall be the duty of the local Registrars to supply blank forms of cer-

tificates to such persons as require them. Each local Registrar shall carefully examine each certificate of birth or death when presented for record, to see that it has been made out in accordance with the provisions of this Act and the instructions of the State Registrar, and if any certificate of death is incomplete or unsatisfactory, it shall be his duty to call attention to the defects in the return and to withhold issuing the burial or removal permit until they are corrected. If the certificate of death is properly executed and complete, he shall then issue a burial or removal permit to the undertaker; provided, that in case the death occurred from some disease that is held by the State Board of Health to be infectious, contagious, or communicable and dangerous to the public health, no permit for the removal or other disposition of the body shall be granted by the Registrar, except under such conditions as may be prescribed by the State Board of Health. If a certificate of birth is incomplete, he shall immediately notify the informant, and require him to supply missing items if they can be obtained. He shall then number consecutively the certificates of birth and death in two separate series, beginning with the number 1 for the first birth and the first death in each calendar year, and sign his name as Registrar in attest of the date of filing in his office. He shall also make a complete and accurate copy of each birth and death certificate registered by him in a record book supplied by the State Registrar, to be permanently preserved in his office as the local Board, in such manner as directed by the State Registrar. And he shall, on the tenth day of each month, transmit to the State Registrar all original certificates registered by him during the preceding month. And if no births or deaths occur in any month, he shall on the tenth day of the following month report that fact to the State Registrar, on a card provided for this purpose.

Section 20. That each local Registrar shall be paid the sum of twenty-five cents for each birth certificate and each death certificate properly and completely made out and registered with him, correctly recorded and promptly returned by him to the State Registrar, as required by this Act. And in case no birth or death were registered during any month, the local Registrar shall be entitled to be paid the sum of twenty-five cents for each report to that effect, but only if promptly made in accordance with this Act. All amounts payable to a Registrar under the provision of this section shall be paid by the

County Trustee upon warrants issued by the Judge or Chairman of the County Court of the county in which his registration district is located, said warrants to be issued upon the certificate of the State Registrar, and the State Registrar shall annually certify to the Judge or Chairman of the County Court of the several counties in this State the number of births and deaths properly registered and the amount due each local Registrar at the rate fixed herein.

Section 21. That the State Registrar shall, upon request, furnish any applicant a certified copy of the record of any birth or death registered under the provisions of this Act, for the making and certification of which he shall be entitled to a fee of fifty cents to be paid by the applicant. And any such copy of the record of a birth or death, when properly certified by the State Registrar to be a true copy thereof, shall be prima facie evidence in all courts and places of the facts therein stated. For any search of the files and records when no certified copy is made, the State Registrar shall be entitled to a fee of fifty cents for each hour or fractional part of an hour of time of search, to be paid by the applicant. And the State Registrar shall keep a true and correct account of all fees by him received under these provisions and turn the same over to the State Treasurer.

Section 22. That any physician who was in medical attendance upon any deceased person at the time of death who shall neglect or refuse to make out and deliver to the undertaker, sexton or other person in charge of interment, removal or other disposition of the body, upon request, the medical certificate of the cause of death, hereinbefore provided for, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars. And if any physician shall knowingly make a false certification of the cause of death, in any case, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than fifty dollars.

And provided further, that any physician or midwife in attendance upon a case of confinement, or any other person charged with the responsibility for reporting births in the order named in Section 13 of this Act, who shall neglect or refuse to file a proper certificate of birth with the local Registrar, within the time required by this Act, shall be deemed guilty of a misdemeanor, and upon conviction

thereof, shall be fined not less than five dollars nor more than fifty dollars.

And any undertaker, sexton or other person acting as undertaker, who shall inter, remove or otherwise dispose of the body of any deceased person, without having received a burial or removal permit as herein provided, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars.

And any Registrar, Deputy Registrar, or sub-Registrar who shall neglect or fail to enforce the provisions of this Act in his district, or shall neglect or refuse to perform any of the duties imposed upon him by this Act or by the instructions and directions of the State Registrar, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars.

And provided further that any person who shall wilfully alter any certificate of birth or death, or the copy of any certificate of birth or death, on file in the office of the local or State Registrar, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars, or to be imprisoned in the county jail not exceeding sixty days, or suffer both fine and imprisonment, in the discretion of the court.

And provided further, that any person or persons who shall violate any of the provisions of this Act, or who shall wilfully neglect or refuse to perform any duties imposed upon them by the provisions of this Act, or shall furnish false information to a physician, undertaker, midwife, or informant, for the purpose of making incorrect certification of births or deaths, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars.

And any transportation company or common carrier transporting or carrying, or accepting through its agents or employes for transportation or carriage, the body of any deceased person without an accompanying permit issued in accordance with the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than fifty dollars; provided, that in case the death occurred outside of the state and the body is accompanied by a burial, removal, or transit permit issued in accordance with the law or Board of Health regulations in force when the death occurred, such burial, removal, or transit permit may be held to authorize the transportation or carriage of the body into or through the state.

Section 23. That each local Registrar is hereby charged with the strict and thorough

enforcement of the provisions of this Act in his registration district, under the supervision and direction of the State Registrar. And he shall make an immediate report to the State Registrar of any violation of this law coming to his notice, by observation or upon complaint of any person, or otherwise. The State Registrar is hereby charged with the thorough and efficient execution of the provisions of this Act in every part of the State, and with supervisory power over local Registrars, to the end that all its requirements shall be uniformly complied with.

He shall have authority to investigate cases of irregularity or violation of law, personally or by an accredited representative, and all Registrars shall aid him, upon request, in such investigation.

When he shall deem it necessary he shall report cases of violation of any of the provisions of this Act to the prosecuting attorney of the county, with a statement of the facts and circumstances; and when any such case is reported to him by the State Registrar, the prosecuting attorney shall forthwith initiate and promptly follow up the necessary court proceedings against the person or corporation responsible for the alleged violation of law. And upon request of the State Registrar, the Attorney General shall likewise assist in the enforcement of the provisions of this Act.

Section 24. That Chapter 341 of the Acts of the General Assembly of the State of Tennessee for the year 1909, entitled, "An Act to provide for the annual collection and registration of births and deaths in the State of Tennessee; to fix the compensation for such collection and registration; and to provide fine and penalty for the violation of this Act." Together with all other laws or parts of laws in conflict with this Act, be, and the same are hereby repealed. And no system for the registration of births and deaths shall be continued or maintained in any of the several municipalities of this State other than the one provided for and established by this Act.

Section 25. That this Act take effect from and after its passage, the public welfare requiring it.

Passed March 23, 1913.

NEWTON H. WHITE,
Speaker of the Senate.

W. M. STANTON,
Speaker of the House of Representatives.
Approved April 2, 1913.

BEN W. HOOPER, Governor.

A true copy.

Attest

R. R. SNEED,
Secretary of State.

THE JOURNAL

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OCTOBER, 1913

EDITORIALS**VITAL STATISTICS.**

Elsewhere in this issue will be found the Vital Statistics Bill as it was passed by the present Legislature and approved by the Governor. This bill will place Tennessee within the registration area if the co-operation of the physicians and county health officers, together with the registrars to be appointed throughout the State do their full duty in assisting the State Board of Health. Without the co-operation of the profession, the provisions and intentions of the bill will be defeated and the amount of money necessary to put it into operation will have been wasted. This bill has the approval of the medical profession of the State and State Board of Health, local municipal boards, and of the County Health Officers' Association. We would urge our members to read it carefully and give their unqualified assistance to those empowered with the authority of its enforcement.

MEDICAL DEFENSE.

At the last meeting of the House of Delegates the question of whether or not the State Association should undertake to defend its members in cases of suit brought for malpractice, was liberally discussed after having been referred to a committee, who unanimously reported in favor of medical defense. The House of Delegates did not wish to assume full authority for making so radical a departure and amended the original resolution so that it would take effect when two-thirds of the county societies had ratified it. Briefly, the provision of the resolution is, that the State Society, through its committee, consisting of Drs. S. R. Miller of Knoxville, H. M. Tigert of Nashville, and Jere L. Crook of Jackson, will defend, without cost to the

member, any suit brought against them for malpractice, provided, of course, that such suit is not based on damages resulting from illegal operations. The assessment to each member was arbitrarily fixed at one dollar per year. The committee at that time had no idea what the expense might be and felt that it would be wiser to make the assessment one dollar and reduce it later if found practicable than to begin with a smaller sum and be compelled to increase it. Many of the State Associations have had medical defense for a number of years and are all enthusiastic over it.

We would urge the county societies, who have not yet acted upon this resolution to do so and send notice of their action either to the Secretary or to Dr. S. R. Miller, of Knoxville. It will, of course, not become operative until January 1, 1914. The committee are unable to formulate their plans until they have heard from county organizations.

CONCERNING "FRIEDMANN VACCINE."

At the recent meeting of the Rhode Island Medical Society, Dr. Barnes of the Rhode Island State Sanatorium for Tuberculosis presented a report on his results with the Friedmann vaccine. It merely adds to the mass of information that goes to make up the literature concerning Friedman's attempt at exploiting the consumptive, all of which shows the Friedmann treatment to have no advantage over other methods of treating tuberculosis; more, in all probability, it is a dangerous one. The medical profession has, until recently, maintained toward this product an attitude of reasonable scientific skepticism, says The Journal of the American Medical Association in a recent editorial. In view of the fact, however, that it seems impossible to find a single reliable favorable report, the time has come for an end to the hope that in the Friedmann vaccine we have a cure for tuberculosis. Moreover, since the methods of exploitation have become so obviously commercial, with what seems to be an utter disregard for the humanitarian viewpoint, the time surely has come for not only a definite stand against the sale of this product, but for positive opposition to the methods used by

those financially interested in its promotion. Friedmann secured the financial results which widespread newspaper exploitation brought him, and slipped away, leaving a host of "Friedmann institutes" to divide with him the dollars of the too hopeful and credulous sufferers. These "institutes" are being organized in various parts of the country and the personnel of those connected with these organizations in practically every instance is sufficient to suggest their true nature. Steps have been taken in several states to check this exploitation of the consumptive for commercial gain, especially in Idaho, Iowa and Arkansas. In others, the weakness of local ordinances has made this impossible. What is now needed is that these unscrupulous attempts should be met with an intensive campaign of education of the public concerning the dangers and worthlessness of this treatment.

News Notes and Comment

Dr. David Seay, of Del Rio, has located at Parrottsville.

Dr. C. E. Barnett, of Newport, is just recovering from an attack of typhoid.

Drs. Masters and Byrd, of Newport, will return to Florida this month where they will spend the winter.

Dr. and Mrs. O. H. Wilson, of Nashville, have returned from a tour through Norway, Sweden and Denmark.

The marriage of Dr. A. J. Nease, of Parrottsville, to Miss Iva Ottinger took place at Newport, September 23.

The Coker County doctors met in Newport, September 13, and succeeded in perfecting a live organization in this county with twelve members.

The engagement and approaching marriage of Dr. D. R. Pickens to Miss Corinne Wadley, both of Nashville, was recently announced.

Dr. J. H. Preston, of Humboldt, will remove his practice to Nashville in the near future, and Dr. J. W. Ousler, of Plant, Miss., will succeed Dr. Preston in Humboldt.

Dr. Herschel Ezell, who has been associated with Dr. Hilliard Wood, of Nashville, for the past year, left the latter part of September for a year's study in Vienna, Austria.

Dr. F. M. Acree, of Dover, Tenn., was returning from a call on September 24 when his horse became frightened and ran away, throwing the doctor out and causing serious injuries about his head.

Fairechild Bros. & Foster, of New York, have been awarded a gold medal for physiological pharmaceutical preparations at the exhibit in connection with the International Conference of Medicine held in London in August.

Dr. J. M. Troutt, formerly of Jackson, Tenn., announces the removal of his residence and practice to 500 W. Fifth Avenue, Minvilla Apartments, Knoxville, Tenn., where he will give special attention to obstetrics and diseases of women.

Dr. and Mrs. J. A. Witherspoon, of Nashville, have returned from London, England, where Dr. Witherspoon attended the International Congress of Medicine. En route home Dr. Witherspoon spent some time in Germany. He also visited at Bad-Nauheim in the interest of Mrs. Witherspoon's health.

Dr. W. B. Russell has opened a surgical infirmary of twelve beds at Jackson, Tenn. Dr. Russell is a graduate of the University of Tennessee and has had post-graduate work in Chicago, besides serving on the surgical service to Nanking Hospital, and the East China Union Medical College. We wish the doctor much success in his new undertaking.

DEATHS.

Dr. H. H. Brown of Jackson, Tenn., died at his home, October 5th, of uremic poisoning. He is survived by his widow and sev-

eral brothers and sisters. Dr. Brown was a member of the Madison County and Tennessee State Medical Associations.

Dr. R. N. Taylor, of Chattanooga, died at his home September 3. Dr. Taylor was 36 years old.

Resolution.

To the Officers and Members of the Chattanooga Academy of Medicine and Hamilton County Medical Society:

We, your Committee on Resolutions on the death of Dr. R. N. Taylor, beg leave to submit the following report:

Whereas, Dr. R. N. Taylor was born thirty-six years ago near Benton, Polk County, Tenn., and received his literary education at Benton Academy and the Cleveland High School, and was graduated from the Chattanooga Medical College in 1901, and practiced in Chattanooga up until three or four years ago, when he went West in hope of arresting the ravages of tuberculosis, returning to Chattanooga, Tenn., where he died at 12:30 a. m., September 2, 1913.

Be it Resolved by the Academy of Medicine and the Hamilton County Medical Society; that in the death of Dr. R. N. Taylor the profession has lost one of its brightest young members, and society a good and useful citizen; and that we deeply deplore his taking off; and that we can only point the bereaved widow and children to our Heavenly Father, who doeth all things well.

And be it Resolved, That a copy of these resolutions be sent the family and a copy spread on our minutes.

Respectfully submitted,

E. T. NEWELL, M. D.,
C. HOLTZCLAW, M. D.,
J. H. BARNETT, M. D.,
T. E. ABERNATHY, M. D.,
W. H. CHENEY, M. D.,
J. C. BROOKS, M. D.,
J. J. GEE, M. D.,
E. B. WISE, M. D.,

Committee.

Passed September 5, 1913.

H. P. LARIMORE, M. D.,

President.

G. VICTOR WILLIAMS, M. D.,

Secretary.

Dr. John H. Howard, of Lexington, died at the home of A. E. Beasley in Lexington, Tenn., on the seventh day of September, 1913, at the age of 81 years, of hemorrhage of the lungs. He was taken suddenly ill and died within a few minutes.

Dr. Howard's early life was spent on the farm in Henderson County. When the war between the States broke out he enlisted in the Confederate Army and served until the war closed. He began the study of medicine with Dr. Warren, of Lexington, and afterwards attended school at the University of Louisville. He had practiced, since his graduation, in Lexington up to the time of his death and was a member of both the State and County Societies, and had served as President of Henderson County Medical Society several terms.

When Dr. Howard began the practice of medicine very little was known about the cause of diseases compared with that which the bacteriologist and chemist have revealed to the profession of today. Dr. Howard was a clinician and stood high in the profession as well as the laity. He was a close observer of the therapeutic action of drugs and his wide experience made him familiar with their uses and indications in the treatment of diseases. He was not only a splendid physician who had attained eminence in his profession, but a high-class citizen in the community in which he lived. He was indeed the family physician in the truest sense of the word, and wherever he went a relation existed between the physician and family that, to a large extent, has been obliterated in this day and time by the easy access to medical centers and hospital advantages. His optimistic view of all conditions, his earnest solicitude for the welfare of his patients, his sympathy for all who were in distress, his benevolence and charity towards all made an everlasting impression upon all those who knew him. His kind are fast passing off the stage of action, but the memory of them will linger with us forever.

Be it Resolved, That the Henderson County Medical Society, as well as the State Society, has lost one of its oldest and most loyal members;

And, That the members of our great society emulate Dr. Howard in his loyalty to his friends and his fidelity to every trust;

And, That a copy of these resolutions be spread on our minutes, one being sent to the State Medical Journal, one to each of the county papers, and one to each of the surviving relatives.

SAMUEL T. PARKER, M. D.,
W. T. WATSON, M. D.,
C. H. JOHNSTON, M. D.,
Committee.

MARRIAGES.

The marriage of Dr. Robert Turner to Mrs. Willie Turner, both of Nashville, took place at the Edgefield Baptist Church September 30.

County Society Proceedings

RUTHERFORD COUNTY.

The Rutherford County Medical Society met in the office of Dr. E. H. Jones, October 1, at 2 p. m.

The President and Vice-President being absent, Dr. E. H. Jones presided over the meeting as Chairman pro tem.

The minutes of the previous meeting were read and approved.

The essayists failing to be on hand, case reports were taken up as follows:

Protracted indigestion with diseased gall-bladder, inflammation and stones present. Operated. By Dr. M. B. Murfree.

Renal colic, in severe form, pains relieved and stones passed. By Dr. S. C. Grigg.

Persistent vomiting. By Dr. A. J. Jamison.

Persistent vomiting. By Dr. Rufus Pitts.

Renal stones, case exhibited. By Dr. E. H. Jones.

General discussion followed.

Members present—Drs. M. B. Murfree, J. A. Scott, E. H. Jones, A. J. Jamison, S. C. Grigg, Rufus Pitts and A. E. Goodloe.

RUFUS PITTS, M. D., Secretary.

HAMILTON COUNTY.

The 763d regular meeting of the Chattanooga Academy of Medicine was held July

18, 1913, at 8 p. m., with President Larimore presiding.

The following members were present: Drs. Fowler, Yarnell, Gee, Hillas, Wallace, Faucher, Bogart, Y. L. Abernathy, Haskins, Hackney, Berlin, Sullivan, J. M. Broyles, Cobleigh, McQuillan, Meacham, Reisman, Cheney, Williamson, Holtzelaw, W. E. Anderson, E. B. Anderson, Travis, Horton, Larimore, F. T. Smith and G. Victor Williams.

Visitors: Drs. Fowzer, Randall and Willis.

Application of Dr. Herman Renner was received and referred to the Board of Censors.

Dr. Gee reported case of tape-worm treated successfully by compound cathartic pills and 5 gr. capsules of Thymol.

Drs. Holtzelaw and Cheney presented a very interesting case of osteitis deformans, caused by mercurialism, tuberculosis or syphilis.

Dr. Cooper Holtzelaw reported a case of cerebral hemorrhage in the new born which was followed by organization of the blood clot with fatal termination of the case.

Dr. Haskins reported a most interesting case of extra-uterine pregnancy with tubal rupture, which was discussed by Drs. Bogart, Wallace and Reisman.

Dr. Reisman had an interesting abstract of an article by Dr. Jabez N. Jackson, which appeared in the April number of the A. M. A., entitled "Retro Coecal Appendicitis," which was discussed by Drs. Wallace, Berlin, Holtzelaw and Reisman. There being no further business to come before the society we adjourned.

The 764th regular meeting of the Chattanooga Academy of Medicine and the Hamilton County Medical Society was held in the rooms of the Chattanooga Manufacturing Association. President H. P. Larimore presided with the following members present: Drs. Wallace, Sullivan, Meacham, Hughes, Brooks, Faucher, Brockwell, E. B. Anderson, MacQuillan, Travis, Cobleigh, Gee, Y. L. Abernathy, T. E. Abernathy, Willard Steele, Yarnell, Renner, Cheney, Haskins, F. T. Smith, Watson, Clements, Holman, Wilson, Hilliard, E. T. Newell, Larimore and G. Victor Williams.

Visitors: Drs. Wright, Randall, Dickey,

Wills, Shipley of Athens, Tenn., Boone, Roberts and J. I. D. Hinds, a chemist of Lebanon, Tenn.

The minutes of the previous meeting were read and approved.

Dr. Yarnell, Chairman of the Board of Censors, reported favorably on the application of Dr. Herman Renner and he was unanimously elected a member of the society.

Dr. J. C. Brooks had a clinic of a child with paralysis, which was discussed by Drs. MacQuillan and Bayard Sullivan. The discussion was closed by Dr. Brooks.

Dr. Raymond Wallace reported a very interesting case of open method of treatment of fracture of femur by Lane plate, which brought out an interesting discussion by Drs. Cheney, Anderson, Cobleigh, Haskins, Fancher and G. Victor Williams.

Dr. E. B. Anderson reported a very interesting case of compression of the brain by sub-dural hemorrhage, necessitating decompression, which gave immediate relief.

Dr. Fancher reported an operation in which he encountered a retro-caecal hematocele or mesentery cyst.

Dr. B. F. Travis delivered a short but most interesting abstract, which was of interest to specialists and general practitioners alike, on wood alcohol as a cause of blindness and death, and this brought out an extended discussion by Drs. MacQuillan, Y. L. Abernathy, F. T. Smith and E. T. Newell. Discussion closed by Dr. Travis.

Dr. John B. Haskins made a report of operation on his case of extra-uterine pregnancy and exhibited the ruptured tube, which was removed after relieving the pelvis of a quart of black blood clots; said operation requiring twenty-two minutes. This interesting case and operations was discussed by Dr. Raymond Wallace.

There being no further business to come before the society we adjourned.

The 765th regular meeting of the Chattanooga Academy of Medicine and the Hamilton County Medical Society was held in the rooms of the Manufacturers' Association, August last, at 8 p. m., President H. P. Larimore presiding with the following members and visitors present:

Members: Drs. Holtzelaw, Travis, Wallace, Meacham, Sullivan, Brooks, Berlin, T. E. Abernathy, Y. L. Abernathy, E. B. Anderson, J. E. Green, Fowler, J. M. Broyles, Yarnell, Godsmark, Cobleigh, Renner, Larimore, Fancher, Clements, Haskins, Cheney, F. T. Smith, J. B. Steele, Holman and G. Victor Williams.

Visitors: Randall, Roberts and Boone.

Minutes of the previous meeting were read and approved.

Dr. G. Manning Ellis was elected delegate to the International Medical Congress, which met in August in London.

Dr. Wallace reported the use of anti-streptococci serum in a case developing a temperature of 103 and 104 in a short time after operation for the removal of pus tubes, ovaries and liberation of many adhesions, with good results. Case discussed by Dr. E. B. Anderson.

Dr. E. B. Anderson reported case of third degree laceration of perineum, which he had just operated upon. Case discussed by Drs. Wallace and Haskins.

Dr. Yarnell then read a very interesting abstract on pellagra, which was freely discussed by Drs. Brooks, Holtzelaw, Cheney, E. T. Newell, Brooks, Godsmark, Travis and Berlin.

There being no further business the society adjourned.

The 766th regular meeting of the Chattanooga Academy of Medicine and the Hamilton County Medical Society was called to order at 8 p. m., August 8, by President H. P. Larimore with the following visitors and members present:

Visitors: Drs. Dickey, Boone, Roberts, Randall and Wright.

Members: Drs. Cheney, Meacham, Godsmark, Green, Blackwell, Wallace, Smith, Cunningham, Brooks, Renner, MacQuillan, Berlin, Winters, Williamson, Barnett, Richardson, Hillas, J. B. Steele, Woolford, Larimore and G. Victor Williams.

The minutes of the previous meeting were read and approved.

Applications of Drs. L. E. Boone and Samuel H. Long were read and referred to the Board of Censors.

Dr. Wallace reported a case of floating kid-

ney which he had operated upon and fixed to fascia and muscles. Case discussed by Dr. Berlin.

Dr. Wallace reported favorable progress on his Lane plate operation which elicited such an extended discussion both pro and con several meetings ago. Case was discussed by Drs. Berlin, Cunningham and Cheney.

Dr. Winter reported a case of Pott's disease, which was discussed by Dr. Renner, who described Alvias and Gibney's operation for Pott's disease deformity.

Dr. Barnett reported a case of so-called pellagra, in which he suspected the pathology to be due to T. B. or hereditary syphilis.

Dr. Wallace asked the question, "Are not all cases of pleurisy with effusion due to tuberculosis?" Case was discussed by Drs. Berlin and Cheney.

It was moved, seconded and carried that owing to the lack of employment of the Secretary, that he be instructed to get out a revised list of nurses.

There being nothing further in the way of employment that Dr. Wallace could think of for the Secretary the meeting adjourned.

The 767th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order by President H. P. Larimore with the following members present: Drs. Wert, Horton, Wallace, Renner, Larimore, Reisman, J. B. Steele, Travis Meacham Yarnell, T. E. Abernathy, Y. L. Abernathy, F. T. Smith, Hackney, Selden, W. G. Bogart, Haskins, Holtzelaw, Hilliard, Blackwell, Long, Godsmark, Barnett, Brooks, Williamson, E. B. Anderson, MacQuillan, Hillas, Stapp, Haymore, Woolford and G. Victor Williams.

Visitors: Drs. Dickey, Randall and Roberts.

The minutes the previous meeting were read and approved.

Board of Censors reported favorably on application of Drs. L. E. Boone and Samuel H. Long and they were unanimously elected to membership.

Dr. Haskins reported a case of a small boy swallowing a pin and developing peritonitis. X-Ray showed pin near McBurney's point,

which he cut down on and found pin protruding through gut. Drain was inserted and he made an uneventful recovery. Case was discussed by Drs. Wallace, Wert and Holtzelaw.

Dr. Raymond Wallace reported an interesting case of urethral catheterization of the right kidney which was followed by passage of stone from kidney.

Dr. E. E. Reisman reported a case of suspected tubal rupture of seven years standing, in which he found cyst of broad ligament and remnants of ruptured tube.

Dr. Barnett reported case of goiter of sixteen years standing operated upon under local anaesthesia.

Dr. F. J. Hackney read a most interesting paper on "Recognition and Treatment of Maxillary Sinusitis, which was freely discussed by Drs. Smith, S. H. Long, B. F. Travis, J. H. Barnett and Fancher. Discussion was closed by Dr. Hackney.

Dr. John B. Haskins read short but instructive essay on "Cancer of the Uterus," which was discussed by Drs. Wallace, Reisman, Wert, Barnett and Godsmark. Discussion closed by essayist.

There being no further business the society adjourned.

G. VICTOR WILLIAMS, Sec'y.

JEFFERSON COUNTY.

The Jefferson County Medical Society met in the office of Dr. Rainwater at Dandridge, Tuesday, September 2, 1913, at 12 o'clock. Minutes of the previous meeting were read and approved.

Dr. Tittsworth gave an interesting report of a case of diabetes insipidus with cure. Dr. Cooper reported a case where pain existed in the region of the sacrum, and exhibited the brace which he used for same. Discussion on these cases followed by Drs. Tarr, Walker and Tadlock.

Dr. Tadlock explained his statement made in regard to the transverse and oblique diameters of the female pelvis at the inlet, stating that he thought the transverse is greater than the oblique diameter, and that Drs. Dukes, Lequire, Brown and King might be mistaken in their views of same.

Dr. T. L. McCarter reported a case of apoplexy.

Dr. Tadlock then made a talk on collections, which was discussed by Drs. Walker, Cooper and Tarr.

Dr. G. D. Lequire was elected to membership in the Society.

The Medical Defense Resolution was postponed until the December meeting, at which time the question will be brought up for discussion, and all members are notified to be present at this meeting.

Subjects for the next meeting are as follows: "Physiology of Digestion," by Dr. W. S. Cooper; "Indigestion," by Dr. G. D. Lequire.

The Society then adjourned to meet in Jefferson City on the second Tuesday in December.

J. H. WALKER, M.D., President,

B. M. TITTSWORTH, M.D., Secretary.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met in regular session on Wednesday afternoon at 2 p. m., September 3, in the office of Dr. E. H. Jones in Murfreesboro, President B. N. White presiding.

The following members were in attendance: Drs. M. B. Murfree, B. N. White, E. H. Jones, A. E. Goodloe, Rufus Pitts, A. J. Jamison, S. C. Craig, E. M. Holmes, V. S. Campbell and R. W. Read.

Post-partum Eclampsia was the subject under general discussion, which was opened by Dr. E. H. Jones, who reported a very instructive case.

The Society authorized the members of the county to invite the Middle Tennessee Medical Association to meet in Murfreesboro next spring.

RUFUS PITTS, M. D., Secretary.

COCKE COUNTY.

This county has for a long time been without a medical society. Some time ago I decided that we would have one, so I began to talk to the physicians about it, and was encouraged to talk it up by some, while others told me that it would be impossible to have a medical organization at Newport. After all this I decided I would try and see what could

be done, so I called a meeting to be held on September 13, going against the opinion of most people that the 13th is an unlucky day, when I took it for a lucky one. On that day we organized the Cocke County Medical Society, with the following officers and members: President, Dr. A. J. Nease; Vice President, Dr. C. T. Burnett; Secretary and Treasurer, Dr. David Seay. Roll: C. T. Burnett, R. C. Smith, J. M. Masters, C. G. Holland, Hiram Byrd, C. W. LaRue, David Seay, J. R. Stevens, G. P. Bingham, J. E. Hampton, J. H. Knight and A. J. Nease.

Dr. C. P. Fox of Greeneville was present and made an interesting talk. Nothing was done at this date but organization, and we now have an enthusiastic society.

DAVID SEAY, Secretary.

JACKSON COUNTY.

The Jackson County Medical Society met in the churchhouse of Whitleyville, which is six miles north of Gainesboro, August 18th. This meeting was a public one and the large churchhouse was filled to overflowing. Dinner was spread by the good people of this neighborhood for the medical profession of Jackson County, in great quantities and in a fine variety, and was one that kings would have enjoyed.

The welcome address on the part of the physicians of Whitleyville and North Springs was delivered by Dr. T. H. Jones, and the response was made by Dr. C. E. Reeves. After this Dr. O. M. White read a very interesting paper on "Eating." The Society then adjourned for one hour—and they did eat.

The meeting was called to order by President T. J. Conditt. The first paper on the afternoon program was by Dr. C. E. Reeves on "How to Stay Well." Dr. E. W. Mabry presented a most interesting paper on "The Prevention of Disease in the Rural Schools." Dr. L. R. Anderson then read a paper on "The Prevention of Tuberculosis."

Following is the program for the next meeting, which will occur in the Gainesboro Court House, September 15th:

"Antiseptics," by Dr. C. C. Fowler.

"Measles," by Dr. F. B. Clark.

"Pertussis," by Dr. C. Sidwell.

C. E. REEVES, M. D., Secretary.

WASHINGTON COUNTY.

The open day session of the Johnson City and Washington County Medical Society was held in the parlors of the Winsor Hotel, and the night session in the M. E. Church, on the first Thursday in September.

The Society was called to order at 10 a. m. by President H. D. Miller, who, in a few well chosen remarks, duly called the attention of the Society to the program. Those present and participating were: Drs. McNabb and Sheddan of Knoxville, Drs. Barker and Erwin of the Nat. Vol. Sol. Home; Dr. Panhorst of Jonesboro, Tenn.; Dr. Zinzer of Kingsport; Dr. Wallace of Watauga, Tenn.; Dr. G. E. Campbell of Elizabethton, Tenn.; Dr. A. P. Fox of Greeneville, Tenn., and Drs. E. L. Deadrick, Long, Randall, Kennedy, Matthews, Sells, Arnold (of Limestone), West, Cass, Estes, Broyles and Cox of Johnson City, Tenn. Every paper and clinical report on the program was delivered by the author, and the discussion on all papers and cases were full and in every way up-to-date.

The first paper offered was "Etiology and Pathology of Typhoid Fever," by Dr. G. J. Sells. After an anatomical sketch briefly given, the doctor went deeply in the causative grounds of the disease, also showing the pathological conditions in these cases.

Dr. Randall properly opened the discussion in complimenting the doctor on his paper and entered into the prime causes and research work, laying stress upon the modes of communication of the disease by dust, water, flies, etc. Dr. McNabb in his discussion laid special stress upon the dissemination of the disease, and said wherever horses existed so did typhoid fever, and that the dejection of the horse was the choice breeding place of the fly, and that he had thought at times there was a peculiar fly like the malarial mosquito and the yellow fever mosquito, but as there was some 500 species of flies, it could not well be demonstrated as to the peculiar specie, if any. The serum treatment came in for a lengthy discussion and was mostly treated as a preventive measure, and which had been well demonstrated by Dr. Fox of Greeneville, Tenn., where they had an epidemic of typhoid fever, and that the prevention by the use of

the serum had proven all that had been claimed for it, but he was not so eulogistic as to its use in the treatment of these cases. The question was also raised in the discussion as to the generating of the typhoid bacillus by certain elements which come in contact with the colon bacillus; that the fly itself and typhoid carriers in persons might be able to generate by some peculiar relations to the germ. The varied pathological changes in the disease was dwelt upon at some length, involving all important organs of the body, abscesses, caries of bones, cerebral involvement, phlebitis and numerous pathological conditions not here mentioned. The next paper on the program was by Dr. Long of Johnson City on "Report of a Case of Eclampsia." This report was well presented and brought forth the responsibility on the physician to carefully examine the urine, and the expected mother two months prior to confinement. There were a number of cases reported, and the reports were ably discussed by Dr. Wallace of Watauga, and others. Blood-letting was recommended very highly in the attack by Dr. McNabb of Knoxville, and he thought the elimination of the poison was quicker by this means than any other, and especially in very severe cases with slow progress in the labor.

The first case or paper offered in the afternoon was by Dr. Sheddan of Knoxville on "Tubercular Peritonitis." The paper was ably written and brought out the positive statement from the Doctor that operative procedure was by far the promising relief for these cases. Dr. Fox of Greeneville opened the discussion on this paper, and went further than Dr. Sheddan in endorsing operative procedure, and from experience he was able to report several cases in which other tubercular areas had been much improved, even in one case of pulmonary tuberculosis, which was relieved by peritoneal operation, and a number of years had elapsed and the patient at this time was well and strong. Dr. McNabb called attention to those classes of cases of a low morning temperature and slight elevation in evening as a diagnostic symptom in the absence of positive evidence of tubercular infection.

Absence of reaction tests are not always to be depended upon and especially where there are large effusions in the peritoneal cavity though due to low vitality, and that the best tests are too sensitive for the very young. Dr. Sheddan closed in highly recommending operative procedures in all cavity cases of tuberculosis.

Dr. Matthews reported an interesting case of puerperal infection which ran a very interesting course, the mother did not develop any untoward symptoms for seven days, when her trouble was ushered in by a chill followed by a very high temperature, urine tests showing a heavy percentage of albumen, great tumefaction and scanty urine as a complication; patient developed a cough with brick dust expectoration; when all means used had profited but little, and the case seemed hopeless, the serum treatment, streptococcus, serum was administered, and there was a steady and permanent improvement in the case after its use and no other complications except a violent urticaria, which soon passed off; this condition was thought to be due to the serum.

Dr. Wallace, of Watauga, opened the discussion, and in a few timely remarks which elicited a good discussion, emphasized the importance of an early and careful examination of all obstetrical cases coming under the notice of the physician prior to the time of confinement.

Dr. McNabb of Knoxville read his paper, "Progress of the Age." This paper was an outlined comparison of now and then, and was a masterful production, which was well discussed by Dr. Panhorst of Jonesboro, both physicians having been in the practice of medicine long enough to graphically describe the customs, etc., of early medicine. It was brought out that it was not always the thing to do to discard the old for the new, as there were many valuable old ways that were very useful.

Dr. E. T. West then offered a very useful and interesting paper on "Renal Calculus," and produced several calculi which had been removed from the bladder and deeper urethra. Dr. H. M. Cass opened the discussion upon the paper and brought out the point that it was difficult to always get a picture of cal-

culi by aid of the X-Ray, and cited several instances where they were not shown to be present by this instrument, when indeed they were and operations and post-mortems had shown the presence of stone. It was suggested that the constituency of the stone made it difficult oftentimes to get the picture of these bodies.

Night Session.

There was a symposium on the following subjects: "Preventable Diseases," by Dr. G. M. Peavler of Bristol, Tenn.; "Personal Hygiene in Public Schools," by Dr. J. W. Cox of Johnson City; "Public Health and the Public," by Dr. J. F. Arnold of Limestone, Tenn.; "Prophylaxis," by Dr. C. P. Fox of Greeneville, Tenn. These papers were read in order and complimented very highly by those in attendance.

The last paper offered was by Dr. R. W. Dulaney of Jonesboro on "Conditions Complicating Gestation." The doctor's paper concluded the program for the day session and came last by reason of his being unable to be present at the opening session. This paper entered more into the finer points of conditions existing than would be expected from any physician other than who had a very wide experience in such matters. The paper entered closely into the sympathetic disturbances of gestation, early appearance of uraemic conditions, tumefaction, urinalysis of the urine, bedside management of difficult complications, gastro-intestinal disturbances, and in all was a very instructive paper. Dr. W. T. Kennedy opened discussion.

J. W. COX, Secretary.

DAVIDSON COUNTY.

August 19th.—The regular meeting of the Academy was called to order at 8:30 p. m. with President West in the chair. Among those present were: Oughterson, Pickens, Savage, Billington, Hill, Sanders, Crawford, Goodwin, R. A. Barr, Duncan Eve, Sr., Litterer, Overton, Hargis, Simmons, Walsh, H. King, Kennon, Ezell, J. Witherspoon, Hatcher, Dixon, Oliver, O. Bryan, Edwards, Aycock, Pollard, L. Caldwell, C. F. Anderson, and visitors.

Dr. Hill, seconded by Dr. Crawford, moved that the reading of the minutes be dispensed with. Carried.

A communication was read by the Secretary from Mrs. Chas. W. Baker, Secretary of the Woman's Department of the Tennessee State Fair, asking for the endorsement of the Academy of the "Better Babies" Contest of the fair. Dr. Savage moved (seconded by Dr. Crawford) that the Academy endorse the "Better Babies" Contest. Carried.

Dr. G. C. Savage then delivered an address on "The Different Methods of Cataract Extraction in Capsule." Dr. Savage exhibited the instrument used in the four recognized methods of cataract extraction in capsule and illustrated his talk with blackboard illustrations. Dr. Savage referred, parenthetically, to poliomyelitis, in which he has become extremely interested in the past few weeks. He stated that he had read of the possibility of poliomyelitis being transmitted by the stable fly, and that inasmuch as several of his chickens, which feed around his barn, had died of an illness which presented symptoms similar to poliomyelitis, he had used his favorite remedy, nrotropin, on some of these chickens so affected and they had recovered.

Dr. Kennon, in speaking to cataract extraction, condemned, with Dr. Savage, Smith's operation and commended the Roumanian operation. He said that we would prefer the old operation to be done on himself rather than any form of the intra-capsular extraction.

Dr. Savage closed, describing further the Roumanian operation.

Under the head of case reports, Dr. Irvin Simons presented the following: July 19th, 1913. Lillian R., age 3. Mother has noticed for several days a purulent vaginal discharge without dysuria. Examination of the child was negative, except for a greenish, purulent vaginal discharge which showed practically nothing but gram negative diplococci. A soft catheter was inserted into the vagina and it was irrigated with a 2 per cent boric acid solution. July 20th. Last night the child was fretful and feverish, and about 11 p. m. the father noticed that she could not move the left lower extremity. Physical examination: Child looks sick. Temperature 100.8 F. Pulse 160. Left lower extremity; paralysis of anterior thigh muscles and leg muscles. Drop foot. Knee jerk absent. Some power left in

the posterior thigh and leg muscles. No sensory disturbances. No disturbances of bladder or rectum. July 21st. The child developed the following arthritic signs: Swelling and redness of meta-carpo-phalangeal joint of left thumb; of the entire left little finger; of some of the meta-carpal joints of left hand. July 25th. Child developed a very tender swelling of the left knee joint. Course: During the next two or three weeks the child ran irregular temperatures between 98 and 103, and has gradually come down to normal. The swellings and vaginitis have subsided. Physical examination: Left lower extremity; anterior groups of muscles have regained very little of their function. Child can very slightly extend the leg. Knee-jerk still absent. Posterior groups of muscles have practically recovered. Slight wasting of leg and thigh. Left knee joint contains fluid, but is not tender.

This case is noteworthy on account of the onset of a symptom complex identical with acute anterior poliomyelitis in the course of gonorrheal septicemia. The coincidence of the two diseases is entirely possible and can not be disproved. Gonorrheal metastases in the course of a vaginitis are common in young children. Metastasis in the nervous system in the course of a gonorrheal septicemia are rare, but to my knowledge occur only as meningitis and are invariably fatal. I have been unable to find a report of a case of gonococcus myelitis.

Dr. Simons reported also a case of patent ductus arteriosus. This was illustrated by photographs and skiagrams. The patient was also presented and examined by a number of those present.

In discussing the later case, Dr. Oughterson said it was important from the patient's standpoint to diagnose these cases correctly, for they are often told they have "heart disease," when they have not. He said he has seen such a case in a patient of 70 which was diagnosed "heart disease" forty years ago and rejected for life insurance. The patient had a patent ductus arteriosus. He said the hypertrophy of the ventricle, which Dr. Simon's case had, was not common and ventured the opinion that in this case it was due

to a constriction of the arch by fibrous tissue just below the entrance of the duct.

Dr. Simons, in closing, said that at first approach the second case looked like a double aortic, but the lack of the Corrigan pulse, non-transmission of the murmur along the arteries and the small pulse pressure rules that out. He believes that the hypertrophy of the left ventricle due to slight stenosis of aortic opening. Dr. Simons then took up the first case reported and discussed it briefly, asking the Academy what they thought of the poliomyelitis side of the case.

Dr. Dixon brought up the matter of the Academy expressing its sympathy with Dr. Cowden over the death of his daughter. He moved that the Secretary be instructed to express the sympathy of the Academy to Dr. Cowden over the loss of his daughter. This was seconded by Dr. Duncan Eve, Sr., and carried unanimously.

Dr. J. M. King presented a series of interesting X-ray plates of the stomach after a bis-muth meal was taken. Stereopticon X-ray views were shown of a tubercular chest.

Dr. Billington presented a case of a large thoracic aneurysm with skiagram of same.

Dr. Oughterson discussed aneurysms, emphasizing with what ease some are diagnosed and with what difficulty others.

Dr. Simons discussed aneurysms as observed by him at Mt. Sinai Hospital. The Academy then adjourned.

August 26—The regular meeting of the Academy was called to order at 8:15 p. m. by Dr. G. C. Savage, the President and Vice-President being absent. Those present were: Drs. Oughterson, Crawford, O. Bryan, Price, Witt, Weaver, Caldwell, Owsley, Leonard, Schell, Ward, Ezell, Aycock, L. Caldwell, Gaines, Litterer, H. King, Sharber, Sharp, Davis, Kennon, J. Witherspoon, Dixon and Pollard.

The minutes of the previous meeting were read and approved after being corrected as follows by Dr. Savage: "That he believed that the source of the infection of poliomyelitis in people is the chicken with a motor paralysis commonly called 'limber-neck,' and that the fly is the carrier of the infective

agent. If this is true, the sick chicken should be killed and burnt or it should be well cared for from flies when being treated."

There being no essay, case reports were called for, Dr. Gaines reporting the following: A boy of 17 who had pneumonia in March, made a slow recovery; cough and dullness over the right lung persisting. Empyema was diagnosed. A needle was passed and pus was obtained. Under local anaesthesia 1½ inches of rib were removed and found a sinus into the lower lobe of the lung. A tube was passed four inches into the lung substance. After operation the cough ceased and temperature came down to normal. Dr. Gaines believes this an abscess of the lung which found its way to the surface.

Dr. Witt: "Where did you make your incision and was it possible that you entered between the lobes?"

Dr. Gaines said that his incision was at the eighth rib and that this was too low to go between the lobes.

Dr. Davis reported a case of fatal haematemesis in a child probably the result of leukemia.

Dr. Oughterson stated that he felt that without a blood examination the diagnosis was not justifiable. He said he had seen two cases die of haematemesis in which the spleen was enlarged, but had never seen other than Banti's disease terminate fatally in this manner.

Dr. Davis said that Osler reported a case of leukemia terminating fatally by haematemesis.

Dr. George Price reported the following: A physician of Kentucky was seen two weeks previous complaining of loss of sight in his left eye. Two years ago was examined by some one in Madisonville, Ky., and put on potassium iodide. Since that time vision diminished to just light perception. Dr. Price diagnosed detached retina which was confirmed by Dr. Savage. The patient was given a sub-conjunctival injection of sodium citrate and sent home. Two weeks later the patient could discern black spots on the card where the large letters are. Dr. Price feels that if he had seen this patient earlier and this line of treatment instituted his vision would have

been satisfactory. Dr. Price talked further on detached retina.

Dr. Price reported another case seen the day before with Dr. Savage. This was a physician from Missouri with detached retina. A sub-conjunctival injection of sodium citrate was given. This is the seventeenth case so treated by Dr. Price and Dr. Savage.

Another case reported by Dr. Price was that of a lady who came complaining that two weeks previous she noticed that she couldn't see so well; the night before she couldn't read. Developing choroidal inflammation was diagnosed and the severity explained. She consented to any reasonable treatment. A sub-conjunctival injection of cyanide of mercury with dionin, acon and morphine was given. The reactive inflammation was very severe, extending on the face and up to the margin of the hair and down on the neck. The reaction continued for a longer period than usual. Her condition improved until now her vision is twenty-twentieths, plus. He thinks the condition is arrested.

Dr. Witt reported a case of a negro boy of 19 who was complaining of painless haematuria for two or three months. All urine passed was like blood. General health good. Cystoscopic examination had not been made. In looking over the patient early syphilis was very evident—history of initial sore, glandular enlargement, headache, etc. Was put on anti-syphilitic treatment and urine cleared up entirely.

Dr. Witt also reported a man seen three weeks previous complaining of "fever" for four or five weeks, the temperature ranging from 100 to 101 F. This patient had been seen by a physician in Indianapolis and urged to go to bed, pulmonary tuberculosis having been diagnosed. Physical examination by Dr. Witt was negative. Blood examination showed a low leucocyte count and positive reaction to para-A typhoid. Later this patient's two children gave a history of four or five weeks fever. The skin reaction of tuberculin showed one positive and one negative and tuberculosis was diagnosed by the Indianapolis physician. Later the youngest boy of the family had temperature and Widal reaction with straight typhoid and found negative. Dr.

Witt had a test made for the para-A type and found positive. He believes that all four patients had para-typhoid.

Dr. Lucian Caldwell reported the following case which he thought might be of interest to dental men especially: "A few nights past, during the discussion of Dr. Bryan's paper on 'Asepsis and Antisepsis,' I think it was Dr. Leonard who inquired as to the cause of infrequency of infection following tooth extraction; to which Dr. Bryan gave as an answer, the free blood supply. While that answer may have included my idea also, viz.: that the hemorrhage which follows the extraction, which is usually free, acts or is a factor in the prevention of infection, just as free hemorrhage following labor seems to flush out as an irrigation and lessens the danger of infection post-partum. However, these remarks were simply introductory to my case, which though rare, infection did take place with extensive necrosis, following extraction of a tooth.

"My finding the specimen, which is unique, in my desk a day or two after the above discussion as to alveolar infection gave me the impetus to report the case."

"During a clinic held by Dr. Paul Eve in the University of Tennessee Medical College in 1905, there was a boy brought in with the history of having had a molar tooth extracted from the right lower jaw which was abscessed at the time of extraction and from which the jaw continued to swell and give pain. It was grossly neglected and allowed to run along in this manner for five or six weeks. He appeared at the clinic with a greatly swollen right cheek and fluctuant. Dr. Eve made an incision $2\frac{1}{2}$ inches long over the middle of the bone from the angle to about the mental process, put his finger into the incision and to my astonishment pulled out what I now exhibit—the fragmental remains of the condyle and the angle of the inferior maxilla. This was eaten in two and literally perforated like a worm-eaten piece of wood, the remnants of the bone floating in the pus. This was the most convincing case of the possibilities of alveolar incision I ever witnessed."

Dr. Crawford reported a man of 50, weight 170, mechanic, well preserved, who was never

sick in his life until one week previous, when he had an attack of indigestion. He went back to work in a few days, but found that he had double vision. Examination revealed a paralysis of the right superior oblique. Dr. Crawford gave a favorable prognosis and put him on K. I. notwithstanding a negative syphilitic history. Dr. A. W. Harris was called in to consult on the neurological side of the case. The latter agreed that in several months the patient would probably get all right, but believed this paralysis to be a forerunner of tabes.

Dr. Crawford reported another case: that of a lady who came for glasses and in routine examination found a white spot in the fundus near the macula. The doctor said he believes this to be a central scotoma.

Dr. Howard King reported the following: "Mrs. C., aged 30, married twelve years. Has one living child 11 years old. Had a miscarriage three years ago. Social condition very poor. Family history. Unimportant. Past history. Diseases of childhood and malaria. No skin diseases except that about five years ago husband communicated syphilis to her, but there was no definite initial lesion that she knows of. A few months after this she had a generalized skin eruption of slight nature with some glandular enlargement. This was unheeded until a year ago when mixed treatment was instituted under the direction of a country doctor. Six months ago she began to complain of joint pains and still had cervical, inguinal and epitrochlear glands enlarged. She had taken the medicine irregularly, so "606" (.6 gm) was given intravenously and was followed in a day or two by severe tonsillitis and bronchitis which cleared up in three weeks. The joint pains and the enlarged glands rapidly disappeared and she gained some flesh and strength and felt good.

Present complaint. Four weeks ago I first saw the patient in connection with Dr. Sharber when she complained of intense itching spells on arms and neck, but chiefly the forearms on which were scattering, scratched papules. They were also on the upper chest, but most of them were on the forearm and back of the hands. There were occasional groups of new, raised reddish papules with much

areola about them and a pale center. They were nowhere else on the body. The patient had been drinking some beer and eating cab-bagè, pork, tomatoes, cheese, etc., for two or three nights. Had some discomfort in epigastrium, furred tongue and slight constipation. Diagnosis was made of acute papular urticaria. Under local and internal treatment the patient reported well in three days. At the beginning of the next week, however (three weeks ago), she was taken with general aching, malaise, fever and slight cough. Three days later she was removed to the City Hospital where, upon closer chest examination, Dr. Sharber found slight dullness posteriorly over the left lower lobe with an impaired broncho-vesicular murmur and sibilant and sub-crepitant rales. The temperature ran from 101 to 103 F., pulse 110 to 130 and respiration 26 to 40. In a day or so she had a very tenacious, difficult, blood-tinged expectoration. Lobar pneumonia was at first diagnosed, but in a day or so the dullness disappeared and sonorous and sibilant rales appeared over the entire chest with an extremely irritating cough and spells of dyspnoea, and it was decided that she had bronchial pneumonia. Two or three days after entering the hospital a confluent, deep red, erythematopapular eruption appeared over the entire trunk, face, neck and limbs except the legs and feet. It was worse in the flexors and had little tendency to itch or burn—in fact, none. This continued, growing somewhat thicker and spreading over the scalp until two days ago desquamation began in rather large patches. The mucous membrane of the mouth contained very shallow erosions back to the fancies and the tongue was rather red. The desquamation scales were from the size of a 5-cent piece to the palm of the hand, but desquamation was not well developed before the case terminated by death yesterday from the pneumonia. On first seeing the eruption I diagnosed toxic erythema, but after the extensive desquamation with slight fissuring in the flexures set in, I think it undoubtedly the scarlatiniform type of erythema.

"The points of interest are: 1. Extreme rarity of this disease. 2. Its association with bronchial pneumonia. 3. Slow development

and late desquamation. 4. Differentiation from exfoliative dermatitis of Erasmus Wilson. 5. Fatal termination exceedingly rare and evidently due to the pneumonia here. 6. Did "606" have anything to do with this development?"

Dr. L. Caldwell asked if salvarsan was followed by internal treatment. Dr. King said he didn't give the "606," but it was followed by internal treatment.

At this point Dr. Savage called Dr. Price to the chair and discussed his theories and work in regard to the part the chicken with its disease "limber neck" played in the role of causative factors in poliomyelitis. He stated that Dr. Litterer and others were assisting him in this connection and believed that he would soon have proof positive of his contention.

Dr. Witt asked Dr. Savage: 1. What he had learned from the works on veterinary pathology in regard to this so-called motor paralysis in chickens commonly called "limber neck;" and 2. Why the doctor didn't write to some of the places as Texarkana, where poliomyelitis is prevalent to find out if the chickens there had "limber neck" or rot.

Dr. Savage talked further on this subject and then the Academy adjourned at 9:40 p.m.

J. F. GALLAGHER, Secretary.

Book Reviews

BOOKS RECEIVED.

THE DISEASES OF CHILDREN. by Henry Enos Tuley, M. D., Late Professor of Obstetrics, University of Louisville, Medical Department; Visiting Physician Masonic Widows' and Orphans' Home, Louisville, Ky.; Secretary Mississippi Valley Medical Association; ex-President and ex-Chairman of the Section on Diseases of Children, American Medical Association; ex-President American Medical Association Medical Milk Commissioners, etc. With one hundred and six engravings and three colored plates. Second revised edition. C. V. Mosby Co., St. Louis, Mo.

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL of The Protestant Episcopal Church in Philadelphia. Volume 1. W. J. Dornan, Philadelphia.

A CLINICAL MANUAL OF MENTAL DISEASES. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia. Octavo of 425 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.00 net.

ESSENTIALS OF PRESCRIPTION WRITING. By Cary Eggleston, M.D. Instructor in Pharma-

cology, Cornell University Medical College, New York City. 32 mo. of 115 pages. W. B. Saunders Company, 1913. Cloth, \$1.00 net.

BOOKS REVIEWED.

LABORATORY METHODS, with special reference to the needs of the General Practitioner, by B. G. R. Williams, M. D., member of Illinois State Medical Society, American Medical Association, etc., assisted by E. G. C. Williams, M. D., formerly of Northern Michigan Hospital for the Insane Transverse City, Michigan, with an introduction by Victor C. Vaughan, M. D., LL. D., Professor of Hygiene and Physiology Chemistry, and Dean of the Department of Medicine and Surgery, University of Michigan, Ann Arbor, Michigan. Second Edition. Illustrated with 43 engravings. C. V. Mosby Co., St. Louis.

This book is designed especially for general practitioners and, indeed, there is a want for such a manual as this volume intends to fill. The general practitioner, especially in the rural districts, does not even yet entirely appreciate the laboratory's aid in accurate diagnosis and to those who do, through the lack of energy and application have allowed it to become an adjunct of the "man higher up." We believe that the more highly technical and exhaustive works on laboratory methods, omitting the minor details, as they often do, have played an important part in the general practitioner's apparent lethargy in this matter, in that these larger works fail to give sufficient fundamental technic to allow the man who has not had a practical laboratory training in the subject to make a beginning.

To those who are in such a dilemma this book will be of much value. The technic described is accurate and simple, and the apparatus that may be used will appeal to those for whom the book is intended. The eighteen chapters are very diversified and named with apparent effort at effect; e. g. the chapter on blood is called "Vascular Dramas;" that on the India ink method of detecting the treponema pallidum (Shaudinn's), "To Find the Treponema Pallidum in Six Minutes," etc.

It is not entirely clear why a chapter of seven pages (!) should be devoted to tissue diagnosis for a general practitioner. This subject often "stumps" the trained pathologist and should be left to him to work out. Nor can we quite understand why a chapter should be given to "Milk and Its Home Modification." These, and one or two other chapters, make us ask the question, "Was the book written for the general practitioner, or written to sell?"

In the chapter on "Dialysis versus Widal," the authors are quite partial to the former. The Widal with dead cultures is described, but the live culture (most widely used and most accurate) is not described or recommended.

The single illustration on the blood (a wood cut) sheds no light whatever on what a blood smear does or could look like under any conditions. And it is our opinion that the illustration of the various forms of the diphtheria bacillus could be labeled anything and have about the same significance.

However, this volume of some two hundred pages will be of value to the general practitioner who has decided to equip a laboratory. After he has mastered the details of this he should get more pretentious texts dealing with the various subjects of which this book gives only a smattering.

J. G.

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CEREBRO-SPINAL MENINGITIS: SYMPTOMS AND DIAGNOSIS.

By A. E. Thayer, M.D.,
Mobile, Ala.

Because of the wide range of symptoms which may be presented in the course of an epidemic by different cases, and the variability of their expression and intensity, it will be wise, in the short time at my disposal, to group them in a rapid review according to the tissues and organs affected.

1. The eye—In some cases the earliest symptom which has been noted has been a lagging of the muscles of the eye, so that movements of the eyeball are slow, as if the extrinsic eye muscles were paretic before any other structure is affected. This sluggishness of the eyes' movements may be present twenty-four hours before fever or pain or other more distinctive signs are observed, but except in the course of an epidemic might easily be misinterpreted, even if observed. Variations of probably similar nature are squint and nystagmus, but the latter is unusual except in the very young. Ptosis and irregularity in the dilatation of the pupils may also be seen quite early, or at a later stage. Conjunctivitis, due to the meningococcus, occurs in a small per cent of the cases of the systemic disease, as a complication in the course of it; but this may be the only site of infection, as in case reported by Verderame (1) Less frequent is a late

purulent panophthalmitis, by which the entire eye may be destroyed. Still another complication affecting the eye, usually late in its development, is optic neuritis and consequent atrophy, and both iritis, choroiditis, and thrombosis of the retinal veins have been reported. Possibly one reason for the late appearance of these graver lesions in the eye is the blocking of the lymph channels by meningococci and pus within the cranium, a condition which is necessarily limited to severe intracranial inflammation.

The ear—Judging from the published cases, the ear is affected in epidemic meningitis rather more often than the eye, otitis media and labyrinthitis being set up by the extension of the infection along the auditory nerve to cochlea and semi-circular canals. The vertigo which follows in such conditions is very difficult, if not impossible, to distinguish from cerebellar vertigo at first; both cause staggering gait and subjective sensations of whirling, either within the head or in the immediate environment, but the lesion of the ear is often followed by deaf mutism, especially in young subjects. Ziemssen(2) reported forty-two cases in one institution which were all of this origin, and twenty-two out of thirty-two deaf mutes in another were similarly caused. Moos(3) reports sixty-four cases, of which thirty-eight arose in this way. Probably the ear complex at times described as Voltolini's disease is really a case of meningococcus infection.

The Nose—Rhinitis is constantly present from the first, and of such importance in both the systemic infection of the individual and as

*Read before the Tennessee State Medical Association, April, 1913.

a prolific source for the spread of the disease, that its importance can hardly be overestimated. Undoubtedly the nose is the chief port of entry for the meningococcus, and it may remain there, causing a mild exudative inflammation, for a long time, before there is any absorption of toxins to cause systemic depression, or of the actual cocci to cause the generalized infection; and, quite commonly, in all cases but the fulgurating, careful inquiry will discover that coryza, pharyngitis and acute catarrhal rhinitis have been the first stage of the disease, and only after the patient's general resistance is lowered by the constant absorption of toxins do the cocci enter the lymph and blood channels and set up the clinical disease which we call epidemic meningitis. It is at this stage, unless too rapid, that the employment of vaccine will often remove the necessity of using the serum later, for it cannot be too much insisted on that before the cocci enter the systemic circulation the disease is local, easily controlled, and but little worse than other colds in the head. It is more than a coincidence that the Dallas outbreak from January to May, 1912, was preceded by many weeks of wet and cold weather, and a large number of "colds" in the community.

Expression.

The face, generally, is pale until stupor or delirium has set in, but the expression is that of pain and excitement, rather than of dullness, as in typhoid, a fact which may be of value early in diagnosis. Later either twitchings of the facial muscles or paresis, with complete paralysis still later, may be observed.

Alimentary Canal—The appearance of the tongue is not characteristic even when the patient has passed into a "typhoid" state, long before which a diagnosis will have been made.

Just as in epidemic influenza, the alimentary canal may bear the brunt of the attack, masking the real nature of the disease, more commonly we note that vomiting is both early and frequent and entirely independent of taking food. The significance of this symptom varies according to the time when it appears, for if early it is an irritative reflex from the effect of the toxins upon the vomiting center in the medulla or possibly upon the large sym-

pathetic ganglia, while its later manifestation may accompany the collection of fluid in the cerebral ventricles. Constipation, from imperfect or lost peristalsis, is almost the rule; diarrhea is seen when the digestive tract is severely involved.

Respiratory Organs.

The respiration may be painful quite early in the onset of the attack, because either the muscles of respiration or their nerves, or both, are affected by the circulating toxins. Inspiration may be slow and labored, and followed by a rather quick expiration, and this in turn by a pause much longer than normal, and this disturbed rhythm, while by no means constant, may be often observed. Of definite lesions along the tract, acute catarrhal bronchitis is very frequent, and bronchopneumonia, but it is difficult to say whether an inflammatory lesion of the parenchyma of the lung is due to direct extension along the bronchial mucosa or an expression of the bacteremia.

The Pulse—Until toward the end of the case, or with the onset of coma, the pulse is not often much accelerated, and there is no constant relation between the temperature curve and the pulse signs. Arterial tension may not be high, the pulse may be compressible and not bounding, but its rhythm is very frequently irregular. The whole picture points both to the general loss of strength and the tendency to collapse, but even more to the direct toxic action of the bacterial poisons upon the individual fibers of the cardiac muscle, as is quite clear microscopically from the loss of striation, the fibrillation, the swollen nuclei and the fragmentation of the fibers. When the case is progressing to a fatal termination, the embarrassed respiration and heart action give a blue clammy surface, with threatening paralysis of both heart and respiration; pulmonary congestion and edema, with increasing CO₂ poisoning, ushering in the lethal ending.

Temperature—One of the characteristics of epidemic meningitis is that its temperature is not in the least characteristic; the range is seldom very high, running usually between 100 degrees and 103 degrees, but periods of

hyperpyrexia may occur, either of short duration or more persistent.

Blood Changes.

The blood commonly shows some degree of leucocytosis, varying between 10,000 in milder cases, and 30,000 in more severe ones, and the chief increase is generally in the polymorphs, especially in adults.

Joint Lesions.

The joints may escape altogether or be the seat of exudative inflammation, of either serous or purulent type, and sometimes the polyarthritis strongly resembles inflammatory rheumatism. As in the latter disease, serous membranes may share in the inflammation or be alone involved, but perhaps serous body cavities are less often attacked than the joints, admitting that the articular lesions are not common.

Kidneys—Some degree of acute nephritis is very common, the urine showing albumin, less often globulin, sometimes being hemorrhagic, and sometimes containing sugar temporarily: as to the presence of sugar, this may correspond to inflammatory lesions in the fourth ventricle or have some relation to the variations of the sugar in the cerebro-spinal fluid. It is not unusual, especially after the vessels and the epithelia of the kidney have suffered damage, to have the meningococci excreted in the urine, from which they may be recovered and cultivated, showing that they are excreted alive, as was observed in several cases in the Dallas epidemic; this would naturally have but a limited interest for the sanitarian in view of the well-known lack of resistance of the cocci to drying and sunlight, but is certainly worthy of consideration in the bed room of the patient and the hospital ward.

The Skin—Neither subjectively nor by the use of a surface thermometer can any great increase in the heat of the surface be discovered as a general rule, and excessive sweating is very rare. Hyperalgesia is quite common, either in a limited or a more generalized distribution, corresponding to the primary excitation of the spinal nerves at their origins in the cord, and in the same areas a sensation of numbness or a well marked anesthesia may follow. Some form of cutaneous erup-

tion is seen in the majority of cases, and, while herpetic and hemorrhagic lesions are the most common, there may be an erythema, often about the larger joints and by preference upon the extensor surfaces, and on such a base herpetic vesicles may develop later; these vesicles may then be the seat of hemorrhages. Rose spots which may resemble those of typhoid and urticaria or morbilloid exanthemata are also seen, as well as complicating herpes zoster. The percentage of hemorrhagic skin lesions varies greatly in different epidemics, and hence the popular name of "spotted fever" is doubly unfortunate, for another disease is also thus named and in addition the eruption of meningitis may not be present early nor hemorrhagic when it forms, and there is a chance of exaggerating the importance of such signs. But, on the other hand, when a hemorrhagic exanthem is present it gives some indication of the gravity of the infection, since it expresses the endotheliolytic effect of the toxin, and if its necrotic action on the capillary walls affects also the surrounding tissue, the necrosis may be followed by gangrene in the spots of first appearance: such a severe cutaneous lesion is, however, quite unusual, and gangrene develops if at all in the large purple areas on the thigh and leg where circulation is less vigorous than elsewhere and infection by saprophytes is easy. That the eruption may be assumed to be the direct effect of meningococci is fairly justified by their recovery from herpetic vesicles in eleven cases examined in my laboratory in the Dallas outbreak of 1912. (4)

Nervous System—The whole group of the nervous symptoms is a distinct feature of nearly every case, but the symptoms in themselves are not specific, but only those which any meningitis may present, though here they are numerous and severe and of varied character; they bear a relation both to the superficial extent of the lesion, over the cortex of the hemispheres and on the surfaces of the cord, and also to the depth to which the process reaches within the mass of the nervous organs, for it travels to a varying degree into the fissures of the brain and cord and also into their substance along the vessels which pass in from the enveloping membranes. Hence it is

not surprising that headache is an almost constant symptom, the pain being very severe, or, if there is preliminary slight headache before the actual inflammation of the meninges is under way, its intensity increases when that occurs. Often at the same time, or preceding headache, there is some rigidity of the muscles of the neck, and pain nearly always accompanies this. At first the pain in the neck may be dull and aching and of but mild degree, but even then the patient dreads to move his head or have it moved, resisting passive motion both lateral, twisting, and antero-posterior. To relieve this pain or to find a more comfortable position, in which the tension of the posterior cervical muscles is lessened, the patient sooner or later retracts the head, and this retraction, goes on steadily to the limit, at first back into the pillow, and then, as spasm of the affected muscles is added, the patient must lie in lateral decubitus to permit the utmost retraction, and to this opisthotonos may be added. The pain is not alone in the back of the neck, it develops along the whole length of the spine and is radiated forward, and in the abdomen may simulate peritonitis, the combination of local hyperesthesia, some rigidity, localized pain and slight fever being easily mistaken for a peritoneal lesion. One case was diagnosed appendicitis, because the pain was apparently worse and the muscular rigidity most pronounced in the right iliac region, and the surgeon was called to operate; this was in a child of three and the mistake is more liable to occur in such young subjects. Unless the general toxemia is extreme very many of the nervous symptoms show a first stage of exalted activity, passing later into partial or complete loss of nervous control. The reflexes, like the patellar, may thus be exaggerated early and lost at a later stage, and perhaps most of the reported cases which include this symptom state that the reflex is lost, but probably the exaggeration precedes this unless the system is overwhelmed. The two signs which depend upon the muscles and nerves of the thighs, namely, that when the patient's head is raised the knees rise also, and if an attempt is made to extend the leg when the thigh is flexed it cannot be done, are

only what may be noted in many persons during perfect health, especially if the subject has short leverages and thick muscles, and probably no signs of meningitis have been more misunderstood than these. When the lumbar cord is the seat of the exudate and the nerve roots locally are involved, Kernig's sign indicates pain even if the patient is semicomatose, because of the mechanical stretching of the sciatic and other nerves at the back of hip and thigh when an attempt is made to extend the leg, and also because the muscles of the part are sore just as those of the neck are, but some experience is required in the application of each of these signs.

The Mind.

The mental symptoms include a first stage of excitement, at times a mere anxiety, at others almost from the first a restlessness and excessive activity which soon passes into delirium, and the latter may be succeeded by coma, or delirium and coma may alternate. Lethargy from the start is very uncommon and is probably due to infection by an unusually toxic strain of meningococci, but the fulgurating type of the disease may be so characterized. Delirium is seldom so intense that the patient cannot be roused, though even then his answer to questions may be incorrect or unintelligible; at times the delirium is nocturnal, at times constant, and it may be low and muttering or violent. When coma follows, the prognosis becomes at once more grave. The mental symptoms may not be the same in the same patient on two successive visits, nor are they of any prevailing type in the same epidemic.

Metabolism.

A striking symptom which may appear with the early manifestations or not till convalescence, and which may reach a surprising degree in a short time, is general emaciation; this may be rapid and nearly uniform over the whole body, and since there are no excessive discharges to account for it, the cause must be the stimulation of the catabolic series of all the cell activities, as a result of the toxemia, plus the inability to take and assimilate food. Of course, bodily wasting is seen in many other infections, but the degree of it

which may be reached in a short time in meningitis is very marked.

The grouping and intensity of the foregoing symptoms give some justification to the division of the cases into clinical types of epidemic meningitis, and five such types are commonly recognizable in any widespread outbreak, namely, the simple, the fulgurating, the intermittent, the abortive and the recessive, which hardly require detailed mention.

So many of the symptoms thus briefly reviewed, and the results of bacteriological examination can be explained only by the actual presence of the meningococci in the circulating blood, as well as the toxins, that one is justified in assuming two distinct stages of the infection, the first including the presence and multiplication of meningococci in the upper air passages, often in enormous numbers, with the absorption of toxins and the systemic depression which follows, and the second including the actual entrance of the cocci into the blood and their distribution all through the body; their effects on the skin, in joints and serous cavities, and within the cavities of the skull and spine, as well as in other deep tissues, will then be more easily understood. It is not reasonable to suppose that the bacteremia follows the lesions in the cerebrospinal axis, for absorption from such foci into the general blood stream is probably nil after the exudate is formed locally. There remains only the other view, in my judgment the correct one, that bacteremia follows from the lesions of the upper air passages, by way of the lymph and blood channels, and that the cerebro-spinal lesions, while usually most important, are but one of the results. The immediate practical bearing of this is that every case should receive a reliable vaccine from the first, for the serum in the spinal canal, when injected, can have but little effect upon the general bacteremia, and while it is acting locally as an opsonin and to some extent as an antitoxin, nothing is being done for the systemic infection unless hypodermic injections of serum, or what is better, because of the very slow absorption of this, similar injections of vaccine, are being made. This is one disease in which the theoretical views

as to the nature of the malady strongly influence the treatment.

B.—Diagnosis: This part of the subject naturally divides itself into four sub-heads, namely, the diagnosis of the clinical disease, the differential diagnosis, the laboratory diagnosis based upon study of the spinal fluid, and the diagnosis of the germ from other Gram negative diplococci.

Remembering the clinical types and the symptoms as reviewed above, either a strong suspicion or a practically positive diagnosis may be formed in most cases when seen during the course of an epidemic, but the first scattered cases, and sometimes the last lingering ones of the outbreak, may not be recognized. An obscure case, either in such circumstances or in the epidemic, should be given the benefit of a lumbar puncture and examination of the fluid obtained, so that further discussion of clinical diagnosis need not detain us.

Differential diagnosis includes the distinctions between epidemic meningitis and the following diseases, with which it may be most easily confounded, namely, typhoid and typhus fever, influenza, acute articular rheumatism, especially in the cervical region, hysteria with opisthotonos, children's diseases with sudden onset especially accompanied by vomiting, and other forms of meningitis like the tubercular. This is perhaps a fairly inclusive list of the diseases between which and meningitis one may occasionally have to hesitate, but here also a study of the fluid obtained by lumbar puncture is so important that we may at once pass to that, for there is neither time nor necessity for detailed comparisons of meningitis with each of the other diseases.

The cerebro-spinal fluid. Since the days of Giuffrè (5) in Sicily in 1882, and Ughetti in the next year, of Marchiafava and Celli in 1884, to Leichtenstern in 1885-92, and Weichselbaum in 1887-8, and our own Flexner, Barker and Councilman, it has been known with increasing precision that some acute diseases which involve the brain and cord and their membranes are accompanied by the presence of diplococci in the fluid obtained by lumbar puncture. Among such pathogenic diplococci may be mentioned the gonococcus, of which a

few cases have been reported; the pneumococcus, which causes isolated and almost always fatal development of meningitis, though Steinfurth has lately published a case which recovered after free lumbar puncture; and the meningococcus, which alone causes widespread epidemics. It was not long before the obvious (6) procedure of removing and examining spinal fluid in doubtful cases became recognized as the one certain element in making a diagnosis. As lumbar punctures began to be made at earlier stages of the disease it was recognized that the meningococcus might not always be present, and some other way of making a diagnosis was necessary, other, that is, than finding the meningococci. At the present time the laboratory work divides itself naturally into tests which are of mere scientific interest and not likely to be of value to the practical man, and certain others which are easy to carry out and which aid materially in diagnosis before the appearance of the diplococci in the fluid. After a brief mention of the normal characters of cerebro-spinal fluid, one or two of these methods may be cited.

The cerebro-spinal fluid is excreted by the choroid plexuses of the lateral ventricles, its normal amount probably varies within narrow limits, but the exact quantity is not known; in pathological conditions we assume that the amount is much in excess of the normal, for it appears to be under considerable pressure and escapes from the puncturing needle with much force, but in such conditions there may be an excess, as shown by pressure symptoms, and yet a comparatively dry tap if the exudates occlude the exit from the skull. Its normal color is a light yellow, or it is without color, clear and transparent, almost as spring water, and such fluid may be obtained by lumbar puncture differing chiefly in amount from normal. Its specific gravity in health is about 1.005 to 1.007, but in all exudative inflammations it rises to 1.010 or 1.015, or even 1.020 and above, approaching, in other words, the specific gravity of the blood plasma according as this escapes from the vessels rather than a part of it is secreted. Normally the reaction is alkaline, but in meningitis this becomes less pro-

nounced, or even sub-acid and distinctly acid, tested with phenolphthalein as indicator. It may contain a copper reducing body even in health, and there is perhaps more than one, for the fluid may reduce Fehling's solution and yet give no osazon with phenylhydrazin, in which case the reducing body is usually pyrocatechin, or the phenylhydrazin test and the spectroscope may show dextrose, as Quinke observed in tubercular meningitis, confirming the report of Zdarek (7) in 1902. Urea, cholin and other elements have been detected in it.

In the early hours of epidemic meningitis the spinal fluid may be in excess, but transparent and without either cells or cocci, but even at this time its alkalinity is decreased and there is very often an excess of globulins, as may be detected by Noguchi's butyric acid test. Among the laboratory tests of but little practical value is the method published by Daciepolu (8). This observer finds that normal cerebro-spinal fluid contains substance which prevents or hinders hemolysis by sodium taurocholate, that this restraining substance is greatly increased in all inflammatory lesions of the brain and cord which affect the membranes, and that it reaches a maximum in epidemic spinal meningitis; it was present in such excess in all his cases and early in the attack. Tests for reducing substances may also be used, but are of less value than for globulin, which latter indicates a more permeable vessel wall and constituents of the blood plasma escaping which do not enter into the normal fluid. On succeeding punctures the physical appearance of the fluid changes greatly; it becomes more turbid, may at some stage be semi-purulent, and usually its fibrin content increases, at first showing as a delicate film suspended from the under side of the surface of the fluid and usually more abundant in the axis of the test tube, or forming a thick coagulum, which may be yellow from admixture of pus.

Cytology of the fluid. The cells present at the beginning of an attack are almost entirely lymphocytes, though an occasional polynuclear may be found, but as the case progresses the polynuclears increase till they are the most numerous cell; with these a regular

find is the large endothelia, which multiply and scale off the serous surfaces, as they do in the lymphatics of the body generally in typhoid. Both the polymorphs and the endothelia are actively phagocytic, coming in time, if the progress of the case is favorable, to contain most or all of the cocci, and, contrary to what has been stated in some accounts, the cocci are very frequently found in the nuclei of these cells. The degree of phagocytosis, which increases with repeated injections of serum, is a fair measure of the progress of the case, for, with a good clinical picture, if many cocci are still found not englobed, more serum is needed. My thionin-fuchsin-acetic acid stain (9) for the cocci proved of great service in distinguishing cocci in both cytoplasm and nuclei of the phagocytes and the degree to which opsonins affected them. As the case recovers the cocci disappear, while many phagocytes are still present, then the number of these cells lessens, and the fluid becomes clear and of lessened amount. The chief value of the serum is undoubtedly to act as a stimulus to phagocytosis, whether the view of Davis (10) that the spinal fluid normally contains no opsonins for micrococci be accepted or not. No punctures are made after the convalescence is well established, and the process of the final disappearance of phagocytes and restoration of normal conditions has not been followed.

Cultivation. The cultural characters of the meningococci are so well known that nothing need be said upon the subject in such a symposium; probably no clinical diagnosis, or therapeutic use of serum, would depend upon either cultural or inoculation methods. At a time like the present much must necessarily be omitted which the literature of the subject contains; in a symposium only the important features can be given, which has been the aim of the speaker.

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REPORT OF AN EPIDEMIC OF CEREBRO-SPINAL MENINGITIS IN AN INSTITUTION.*

By Thomas Weaver, M.D.,
Nashville, Tennessee.

This outbreak occurred at the Tennessee Industrial School, an institution that numbers nearly 800 boys and girls. The school is well situated near Nashville, and the health of the pupils is, on the whole, quite good. The institution is divided into four departments, each of which has its individual buildings, separated some distance from the others. The epidemic was confined to the main building in the boys' department.

There were 21 cases in the epidemic, 19 boys and 2 young women, one a teacher and the other a stenographer employed in the superintendent's office. At the time of the outbreak there was very little illness in the institution, and when I made my morning visit on the day the first case appeared there was not a boy in bed.

An effort was made to determine the source of infection, and to limit its spread. The first case had been in the school five days when he became sick, and it was thought that he might have been a carrier. All cases were promptly isolated, the noses and throats of pupils and employees in the school were sprayed twice daily, and cultures were made from the noses and throats of the 500 boys in the infected department. The cultures showed that about 20 per cent of these boys were carriers. The carriers were isolated and sprayed every three hours.

*Read before the Tennessee State Medical Association, April, 1913.

The first spray solution consisted of menthol, thymol and camphor a. a. gr. v. in liquid albolene 3 iz; later Dobell's solution was used, and finally a 20 per cent solution of argyrol was substituted. We were unable to determine definitely the relative values of the different solutions, but all seemed to do good, as shown by repeated cultures.

It was a noteworthy fact that no cases developed among the smaller boys, from 10 to 14, in another division, although about 70 of these boys had mingled daily in the school-room, band or shop, with the pupils of the infected department; they returned at night, however, to their own dormitory, and ate in their own dining room.

The first cases were admitted February 12, and the last case developed April 3. The following is a list of the cases with their ages, date of admission, and number of punctures:

1. Jessie W. -----	13	Feb. 13, 1913	11
2. Ben B. -----	15	Feb. 13, 1913	7
3. Caldwell D. ---	19	Feb. 13, 1913	5
4. Earl P. -----	14	Feb. 14, 1913	3
5. William B. ----	17	Feb. 14, 1913	4
6. Homer E. -----	19	Feb. 15, 1913	3
7. Melville H. ---	16	Feb. 17, 1913	1
8. Harvey McN. --	15	Feb. 19, 1913	6
9. Enloe H. -----	15	Feb. 20, 1913	1
10. Wyatt E. -----	17	Feb. 22, 1913	9
11. Ray H. -----	17	Feb. 22, 1913	1
12. Jessie W. -----	15	Feb. 23, 1913	4
13. Harry S. -----	15	Feb. 26, 1913	1
14. Leslie H. -----	16	March 2, 1913	2
15. Miss Mamie C. -	26	March 2, 1913	5
16. Ray A. -----	16	March 2, 1913	1
17. William E. ----	16	March 3, 1913	5
18. Elber L. -----	17	March 6, 1913	2
19. Vernon W. ----	16	March 13, 1913	1
20. Maxie L. -----	19	March 26, 1913	2
21. Mrs. John W. ---	24	April 3, 1913	2

Five cases received 1 puncture, four 2, two 3, two 4, two 5, one 6, one 7, one 9, and one 11. The average number of punctures was $3\frac{1}{2}$. The usual dose of serum administered was 30 c. c., but in one case a single dose of 15 c. c. was sufficient for a cure. In two cases 45 c. c. were given at a dose. Punctures were made every twenty-four hours until the temperature was markedly reduced, and the patient's general condition improved. Clinical signs, rather than bacterial findings, were used as a guide in the administration of the serum, and if the tempera-

ture became normal, the mind cleared, and the general condition favorable, punctures were discontinued, regardless of the number of doses that had been given. This plan was followed even though the spinal fluid was positive at the last puncture. In most cases convalescence began when the temperature reached normal, but in a few instances fever returned, and the general condition was not so good; in such cases punctures were again made, and the symptoms promptly subsided.

In making punctures a weak solution of cocaine—one-quarter grain in twenty minims of water—was injected into the skin and deeper tissues, with very satisfactory results, as the patients generally complained very little of pain. In the writer's hands the straight puncture, in the median line, has proven most satisfactory, care being taken that the spine is well flexed and the skin taut at the site of puncture, else the needle is apt to slip past the interspace and strike bone.

The meningococcus was isolated from the spinal fluid of all but two of the cases, and these two were punctured but once. Both these cases were carriers. In three other cases the spinal fluid was negative at the first puncture, but positive at the second.

Punctures were made in almost every instance in the first twenty-four hours, and in some cases in twelve hours or less. One case was punctured four hours after he became sick. In this case the spinal fluid was negative at the first puncture, but positive later.

The beneficial effects of the serum were, in most instances, prompt, and in many cases startling. The delirium grew less, the fever lessened, the headache diminished, and consciousness returned. A peculiar feature of several cases was cyanosis, with absence of radial pulse, which reappeared after puncture. In one case—the first admitted—there was no radial pulse for thirty-six hours. At the time of puncture this boy's heart beat with the stethoscope was 189, and within a short time after puncture it had dropped to 138. Improvement in the pulse, and disappearance of the cyanosis were frequently marked after puncture.

The only unfavorable effect of puncture

was a depressant effect on the circulation in a few cases, but this soon passed off.

In several instances in which puncture was made once upon admission, without waiting for the appearance of meningeal symptoms, the patients were never unconscious, despite the fact that the temperature was high and the facies indicated a grave illness. In others, in whom the temperature was no higher, and who did not appear seriously ill, puncture was delayed for further symptoms; in these cases there was loss of consciousness, and the disease ran a more severe course.

We were greatly aided in our diagnoses by the presence of spots, which were found in nearly every case. This was especially true of the first three cases admitted the same day. The rash in most instances consisted of minute spots of bright red color; in others they closely resembled the rose spots of typhoid fever; while in one case the eruption was distinctly macular, and quite abundant over the back and chest. The spots, usually few in number, were generally found on the face, neck and chest. They appeared early, as they were noted when the cases were first seen.

The value of this sign may well be appreciated when one considers that in many of our cases there was at the onset not only a complete absence of meningeal symptoms, but the appearance of the patient did not indicate a severe illness, despite a fairly high temperature. And yet these same cases, when not punctured at once, in twelve or twenty-four hours would be deeply unconscious or wildly delirious.

The onset in all cases was marked by headache and fever, frequently accompanied by nausea and vomiting. Oftentimes there was a distinct chill, and in many instances pain in the neck, back and lower extremities, with weakness and difficulty in walking.

The most striking feature of the epidemic is the mortality, which shows the marvelous potency of anti-meningitic serum when used early. There were 21 cases in the outbreak, and 2 deaths—a mortality of less than 10 per cent.

The two fatal cases were a boy of 16 and a woman of 26. In the first case death oc-

curred in 36 hours. Puncture was made early, but there was no improvement, and the boy grew rapidly worse. The second case terminated fatally on the 63rd day. In this case death was hastened by a lobar pneumonia, of pneumococcal origin, but the autopsy showed a chronic meningitis, especially marked at the base, distended ventricles and extreme degeneration of the cord. The meningococcus was isolated from the exudate, despite the fact that the spinal fluid had been negative for weeks, and was still negative at the time of death. The spinal canal was not opened. This case was almost hopeless from the beginning, but she improved so much after puncture that for a time it seemed that she would recover.

The virulence of the epidemic is shown by the number and severity of the complications and by the toxicity of the micro-organisms. Dr. Litterer tells me that the meningococci from the spinal fluid of many of the cases were exceedingly toxic to guinea pigs; in fact, he had never seen greater virulence manifested by this micro-organism.

Three cases had a severe infection of one eye, with total loss of vision in each instance. In one case loss of hearing was complete, and in another there was deafness in one ear. The second case of deafness was blind one week, but sight was afterwards restored. Orchitis was present once, and a slight arthritis twice. Five of the cases were so desperately ill that they were considered well-nigh hopeless.

In closing I cannot but add a word of grateful appreciation for the assistance of my consultants, Drs. A. W. Harris and B. G. Tueker, who so generously shared with me the labors and responsibilities of this epidemic. And to Dr. William Litterer and his assistants, Drs. A. A. Eggstein and Herman Spitz, I am deeply indebted for careful and painstaking bacteriological work, which was of the greatest value in the management of the outbreak.

Conclusion.

These are the lessons taught by this epidemic:

1. Importance of early puncture. If meningitis is suspected, puncture at once, do not wait for rigidity and loss of consciousness.
2. A diagnosis of meningitis from clinical

signs alone is often impossible at the onset, when meningeal symptoms are not infrequently entirely absent.

3. In anti-meningitic serum we have a wonderfully effective therapeutic agent, when used early. The mortality in this epidemic was less than 10 per cent. Recovery, even in the most desperate cases, may be hoped for when puncture is made early.

4. In favorable cases the beneficial effects of the serum are, as a rule, quickly and strikingly shown. The temperature falls, pain decreases, delirium and restlessness subside and there is a general amelioration of the patient's condition.

BACTERIOLOGY AND PATHOLOGY OF CEREBRO-SPINAL MENINGITIS.

By Wm. Litterer, M.D.,
Professor of Bacteriology and Pathology,
Vanderbilt University,
Nashville, Tenn.

Cerebro-spinal Meningitis is an acute infectious disease occurring sporadically, and in epidemics, caused by a specific bacterium, the diplococcus intracellularis meningitidis, commonly called the "Meningococcus of Weichselbaum." This organism appears to have been first observed by Leichtenstern in the meningeal exudate as early as 1885. However, the first most important work upon it was that of Weichselbaum, who, in 1887, described it in minute detail as the characteristic micrococcus found in six cases of epidemic cerebro-spinal meningitis. His findings have been amply confirmed by practically all well known investigators. An attempt to nullify the unity of the affection by tracing some cases to the pneumococcus has been long since abandoned, and it is no longer recognized as an etiological factor in the epidemic form of this disease. It is quite true that the pneumococcus and other organisms occasionally produce cerebro-spinal meningitis that sometimes cannot be distinguished clinically from the epidemic form, and that not infrequently a microscopical and a bacteriological diagnosis is necessary in order to clear up the case.

This is due to the comparatively close pathological findings of the epidemic form as compared with other similar clinical types of meningitis, due to other micro-organisms other than the meningococcus.

Morphology. The diplococcus intracellularis is a micrococcus of the size of the ordinary pathogenic micrococci. The diplococci have an unstained interspace, are decolorized by Gram's Stain, may occur in tetrads or in short chains. No capsule is present, although irregularities in staining and the occurrence of swollen cells have led to some confusion on this point.

Involution forms are common. In cover slip preparations of the meningeal exudate or of the cerebro-spinal fluid, the meningococcus appears in diplococcus or in tetrad form. It occurs characteristically in the interior of the polymorphonuclear leucocytes, being sometimes so packed with diplococci that the nucleus is obscured. Many other leucocytes in the same field may not contain a single micro-organism. When the diplococci are found to be extra-cellular, the prognosis is considered to be not so good as if they were within the cell (intra-cellular).

In very early cases the spinal fluid sometimes fails to show cellular elements, and is therefore perfectly clear. This clear fluid, when tested, will be found to be increased in the per cent of globulins as detected by the Butyric acid test, and also a diminution in its alkalinity is often present. At a later puncture the fluid will usually be turbid, in which will be found many polys and a few lymphocytes and large endothelial cells. If the case is progressing favorably, practically all of the cocci are phagocyted by the polynuclears and the large endothelial cells. If the cocci are extra-cellular, regardless of a good clinical picture, the injection of the antimeningitic serum should be resorted to. The carbolfuchsin-thionin stain is very good in determining the presence of living and dead cocci. The living extra-cellular cocci are stained blue with thionin. The dead or dying ones are reddish or deep red. The nuclei of pus cells are blue, cytoplasm light red.

Cultural Characters. In artificial media the

growth of the meningococcus is often quite scanty, especially when obtaining cultures of the organism from pathologic exudation. Subsequent transplantations propagate much more readily. It grows aerobically at temperatures from 25 degrees to 42 degrees C., preferably about 37 degrees C. Media containing animal proteid such as ascetic or defibrated blood are most suitable for its growth. Sheep serum agar or broth with one per cent calcium carbonate are undoubtedly the most satisfactory media for its propagation. The addition of glucose also favors its growth. It grows very freely on plain agar and broth, also in milk and on potato. There are exceptions to this, however. I have found in a few instances where the organism would only grow on agar refusing absolutely to multiply in any other media. I invariably adopt the following as a routine in culturing the spinal fluid, viz: to plant it (1) in sheep serum agar, (2) Loeffler's blood serum, (3) plain or glucose sugar and sometimes (4) sheep serum glucose broth. The above is more apt to give positive results than if a single culture were used. The fermentations caused by the meningococcus in media containing various carbohydrates are fairly constant, and a very considerable aid in differentiating it from a group of diplococci quite similar in morphology, in staining, and in their growth on many media.

Agglutination With Specific Immune Serum.—This is quite valuable, especially if used quantitatively to serve to differentiate the meningococcus from other gram-negative diplococci such as the pseudomeningococcus, the micrococcus catarrhalis, the diplococcus crassus, the gonococcus, etc. It may even be necessary to arrive at the agglutinin absorbing capacity or the deviation of the complement to arrive at a satisfactory differentiation.

Vitality of the Meningococcus.—All the evidence available indicates that the life of the meningococcus outside the human body is very short indeed. It is a very fragile and delicate organism readily killed by the chemical disinfectants in common use, and by a temperature of fifty degrees C. in five minutes. It is quite probable that the organism

may in some instances live longer in particles of sputa or pus coming from patients, convalescents or healthy carriers than is generally believed, but judging from my experiments, it is difficult to conceive how the germs could maintain their vitality to such an extent as to produce the disease from the dried sputum, pus or nasal secretions containing meningococci.

Original Investigations.

In order to determine the viability of the meningococcus, fifty-six samples of sputa and nasal secretions were collected from three kinds of carriers, viz.: (1) patients; (2) convalescents; (3) healthy carriers. Soon after the samples were obtained they were inoculated on three varieties of media, to-wit: (1) Sheep serum agar; (2) Loeffler's blood serum; (3) glucose agar. The meningococci were culturally demonstrated in every one of the fifty-six samples on one or more of the above media.

Knowing that each sample contained living meningococci that could be grown on suitable media, an admirable control was thereby obtained. The samples were divided into three equal parts and were subjected to different rates of dessication under different conditions, viz.: Sample No. 1 was allowed to dry in the dark at about room temperature (70 to 75 degrees F.) Sample No. 2 was submitted under identical conditions as if expectoration had been upon the sidewalk (diffuse sunlight, weather partly cloudy, temperature ranged from 55 to 65 degrees F.) Sample No. 3 was allowed to dry in the incubator (98.6 F.)

After the above samples had dried, they were then transferred to the various culture media with a view to ascertain whether or not the meningococci were capable of cultivation. The result was that absolutely negative findings were recorded in every instance. From the above I would infer that direct transmission (droplet infection, etc.) is probably the only means of conveying the disease.

Normal Habitat and Mode of Entrance.

It has been definitely proved that the natural habitat of the meningococcus is in the nose and throat of certain individuals, viz.: (1)

Meningitic patients; (2) convalescents; (3) healthy carriers. It is through the medium of an intermediary or healthy carrier that the disease is spread. The meningococcus first lodges in the throat, and especially in the nasopharyngeal cavities. Multiplication then takes place. It is a matter of great speculation as to the mode of entrance of the infectious agent to the cranial cavity.

Macroscopically there is no evidence of a direct extension of the meningococcus from the throat or nose to the cranial cavity. This has been repeatedly studied by exposure of the sinuses by splitting the skull sagittally which failed to reveal any evidence of a mode of entrance of the coccus. The passage of the infectious process from the throat and nose through the cribiform to the base of the brain is held by many as the probable mode of entrance. However, there are others who strenuously deny any theory of direct extension. Of the points against the theory may be mentioned two:

First, if the process by direct extension from nose or throat takes place, the infection would necessarily pass by the lymphatic route.

Second, the base of brain is the least affected by the infection as compared with the damage done to the cord. Proving that cord damage is always primary to cerebral injury.

Theory of Bowel Infection.—Some investigators have suggested that the meningococcus reaches the bowel by ingestion of this micro-organism. In substantiation of this theory they call attention to the great swelling and congestion of the mesenteric glands in patients suffering with meningeal conditions of the epidemic type.

Theory of Blood Route.—In view of the foregoing I am of the opinion that the meningococcus travels from the nose and throat to the cerebro-spinal canal by means of the blood route. In numerous instances the micro-organisms have been isolated directly from the blood, the urine, the bile, etc. Autopsies have revealed its presence in the spleen, liver, endocardium, joints, etc. It may be assumed that the meningococcus first invades the blood stream from the throat or nose, and because of its specific affinity for meningeal tissue attacks the coverings of the cord and brain.

Probable Mode of Entrance.—The outset of the disease is quite insidious. There is very often a throat infection associated with a nasal irritation. Not infrequently so severe is the inflammation that a membranous exudate sometimes mistaken for diphtheria is observed in these cases. Enmeshed or lying in the leucocytes of this exudate are found the diplococcus *intracellularis meningitidis*. The blood invasion of the organisms free in the exudate may be well accompanied by lymphatic absorption. The engulfed cocci within the leucocytes may traverse the same route to gain entrance to the blood, although they may assume a different route owing to the power of the leucocyte of amoeboid motion. Not every invasion of the blood stream is followed by an infection of the membranes of the spinal cord and brain. There must be a lowering of tissue resistance brought about in some instances by trauma, sudden chilling, fatigue, poor hygienic conditions, all of which are predisposing factors. Again, it has been repeatedly observed that the blood serum will exhibit a definite bactericidal action to the meningococcus, while the cerebro-spinal fluid will fail to show the slightest evidence of bacterial antagonism. With this state of affairs existing it is not difficult to interpret the manner in which the infection arises when we reflect that the micrococcus *intracellularis meningitidis* has a specific affinity for meningeal tissue.

Conclusions.

(1) From our experiments we were unable to grow on the various media the meningococci in dried sputum, pus or nasal secretion derived from meningitic patients, convalescents or healthy carriers.

(2) The meningococcus appears to be of so short viability and so fragile an organism outside its natural habitat (the human body) that it leads to the inference that direct transmission (droplet infection, etc.) is probably the only means of conveying the disease.

(3) In institutional epidemics the wisest procedure is the prompt isolation of all patients. The search for carriers and their detention, together with the general use of the spray.

(4) There is apparently no known means

at our command in which the persistent carrier can with any degree of regularity be rendered free from the carrier state.

DISCUSSION.

DR. R. W. GRIFFIN, Tiptonville: There are some things which should have been brought out in this symposium in another paper, and among them is the duty of the physician to the public in these cases of epidemic cerebro-spinal meningitis. The doctor owes a duty to the public in suppressing undue excitement and an undue expenditure of public funds in a way that is not very practical for good results. My experience with cerebro-spinal meningitis has been limited to twenty-nine or thirty cases. I have not had the privilege of having the assistance of laboratory work, but have had to rely mostly on clinical observation, and I have been forced to the conclusion that there are other means of carrying cerebro-spinal meningitis than through the carrier. In hospital practice or city practice where you can locate a circumscribed area, you can find these carriers, but there is a tendency to run off on the theory that they are the only way in which the disease is spread. I do not dispute the fact that there are carriers of meningitis, and am sure that this is a way in which it is spread, but there are other means which we find in country practice where patients are so isolated that we can determine and know that beyond question they have not come in contact with carriers. I am forced to the conclusion from observation that there are other means of communicating cerebro-spinal meningitis, or that there are other means of acquiring it. How that is I am not pretending to say, owing to the limited number of cases, but I do say in an observation of several cases, in only five cases was the carrier to be traced as a possible cause, in only two families were more than one case in a family. Our cases were negroes, usually of the poorer class, who live under poor hygienic surroundings. We found by close observation of these cases that they had not come in contact with any of the other cases, nor had they been thrown in contact with any mutual third party who could have been a carrier to any of them. So there are numerous exceptions to the rule in country practice.

Speaking of blood pressure in the cases that came under my observation, I found that blood pressure was not apparently affected. Also in the epidemic we had of a small number of cases we found that the characteristic symptoms, especially those spoken of by Dr. Thayer, were very marked, because the poorer class of patients do not send for a doctor in time for him to have an opportunity of making an early clinical diagnosis. When we come to the bedside of the patient the diagnosis is very apparent, and especially the

characteristic breathing, the characteristic condition of the eye, as well as the condition of stiffening of the neck.

As to the treatment I do not think there can be any question but what the serum treatment is the only treatment for cerebro-spinal meningitis with the addition of morphia. I think if there is any time when a doctor is justified in using morphia, but with a great degree of caution, to the extent of relieving pain, it is in the first few hours you see the patient, then I think we get better results from the use of morphia than from any other drug we may use in this connection. In the first or earlier cases we have had I did not use morphia, because I was afraid to do so. I invariably had very sad results in those cases, but in those cases in which I resorted to the use of lumbar puncture I gave them likewise a hypodermic injection of one-eighth or one-quarter of a grain of morphia. I got satisfactory results from it.

DR. H. H. SHOULDERS, Nashville: With reference to the management of an epidemic of cerebro-spinal meningitis, the advice we might give to an individual case is different from the advice we might give to the public in general.

With reference to the distribution of literature advising against the use of meningobacterines as a preventive of meningitis, the State Board of Health, after it was apparent that we were confronted with some epidemics in different parts of the state, and, in that meningobacterin was being advertised by different companies, particularly by Mulford & Company, we set about investigating as to what had been done up to that time experimentally with the meningobacterin, and what it had proven to be up to that time.

Dr. Flexner had never experimented any with it, and could claim nothing for it, but thought it would do no harm. The United States Public Health Service advised that it would probably do no harm, and probably do no good, and different bacteriologists in the United States gave the same advice—some of the men advising that they thought it was probably of some advantage. A public Health Officer, in attempting to mould public sentiment in the presence of the fact that you have a general public that is alarmed, who is willing to take hold, or to jump at anything you may advise, is in a peculiar position, and I think it is up to the man who occupies that position to be conservative in what he advises. What an individual practitioner may advise in an individual case, would be different entirely in its effects.

As to the number of cases that occur, I had some experience in the Dyer County epidemic, visiting the county three times. There have been some conflicting reports as to the results there. Going into the nature of the epidemic, it is peculiar that the Dyer County epidemic is not like any

other epidemic—the history of which I have studied. In the first place, there were more cases per population than in any other epidemic with which I am familiar. There are 27,000 people in Dyer County, and there occurred over 200 cases of cerebro-spinal meningitis. The spray and meningobacterin were used, but that epidemic ran away and clear above the normal of what would have occurred in an epidemic in which nothing was used. The spray was used probably more or less indiscriminately, in that the doctors could not supervise the use of it and the cases occurred in a low class of negroes in a large per cent of instances, who made poor use of it. Anyway, in spite of the fact that meningobacterin was used, and in spite of the use of sprays and quarantine, the epidemic ran above the normal.

There are other instances in Tennessee in which one or two cases occurred without others occurring.

As to the results of meningobacterin: I had a communication from one of the assistants, who was in charge at that time, Dr. Moody, who is interested in this line of work, and who studied the epidemic. He states that there were twelve cases of meningitis which occurred in individuals after the use of meningobacterin. Three of these occurred after the first dose—some one day, and some two or three days after the injection. There were three cases that occurred after the second dose, and six cases occurred after the third dose (the full treatment), and there was one other that was questionable as to whether he had three doses or not.

The outcome of all these cases was not given at the time because the cases had not terminated.

We have had another epidemic, and I believe one of the most systematically worked up epidemics that we have ever had a history of, the one to which I refer, occurred here in the Industrial School. There Dr. Literer made swabs of the throat and noses, with a view of determining which of these individuals were carriers, and he isolated the carriers and patients, and then used the spray, with the result that of 100 carriers sprayed for two days only twenty-seven were still carriers. This is the most convincing evidence in favor of the spray that I have been able to obtain.

DR. W. M. McCABE, Nashville: I want to say a word or two about the treatment. Everybody agrees that the only treatment for cerebro-spinal meningitis is the administration of serum. Therefore, the essential thing is to know how to administer the serum. I believe it is almost homicidal to anesthetize one of these patients for the purpose of performing spinal puncture. If there is any way around it we should never anesthetize them. In the second place, I believe the amount of serum injected in the spinal canal should be entirely regulated by the blood pressure. Dr.

Sophian in the epidemic in Texas has shown that the withdrawal of spinal fluid will sometimes produce a marked fall of blood pressure, and, on the other hand, if we inject serum it will produce an equal falling of the blood pressure and has resulted in death. Therefore, we believe the guide to the amount of serum that should be given should be regulated almost entirely by the condition of the blood pressure. We have given as much as 60 or 70 c.c. of antimeningococcic serum. If you withdraw a large amount of fluid, there is no objection to injecting a large amount of serum because the serum is bacteriolytic, and we believe the more serum you can get into the spinal canal, the more bacteria will be destroyed. We usually inject it every twenty-four hours.

I was in the New York epidemic of 1904-1905, and while I saw many cases in the same family, that is, two or three cases in the same family, during that entire epidemic in which we had 2,500 cases, there was only one interne in the hospital who developed the disease. Since I have been in the City Hospital we have treated these patients in the same wards with the other patients, and we have only had one patient develop the disease, and that patient was one who had tuberculosis. I do not advise that these patients should be treated in the same wards with other patients, and since we have had this case develop we have practically ceased to treat them in the same ward, but isolate them in other parts of the hospital. It is about as infectious as pneumonia.

When should we stop injecting the fluid? The only absolutely correct standard of when we should cease to inject the fluid is when we find the spinal fluid absolutely sterile on culture. You may inject the serum until the temperature comes down, until the patient is apparently well. You may have a relapse, but if you inject the serum until the spinal fluid is absolutely sterile on culture, you have a positive index that the patient is well and will not have a relapse. I have never had any experience with the bacterins, but it looks to me that if you should give a man bacterin to-day and perhaps he would develop meningitis to-morrow, it would be a very dangerous and probably fatal procedure. We know that in typhoid fever if you administer vaccines, and the patient at that time is in the prodromal stages of the disease, that is if he contracts typhoid during the stage in which the opsonic index is lowered, the case may terminate fatally. Cases have been reported in which death has occurred. Therefore, I believe the use of meningo-bacterins may be exceedingly dangerous, and I believe it is better to wait until we have more confidence in them and more evidence that they are of value.

DR. A. H. MOODY, Dyersburg: I was in Dyersburg during the epidemic of cerebro-spinal meningitis, and I want to lay stress on the point that the germ does not die as early as some of the

bacteriologists claim. I believe it lives a long time. I read an account of (Jaeger) where a culture was made from the meningococci, after it was dried upon cotton retained in petri dishes for 127 days. What can be done once can be done twice. Also, we have a case that has been reported from the lumbar puncture needle used at a certain place, that was carried some forty miles, and was in a box about fifty days, the disease developing in a child a few days after the child had played with the needle in a territory in which they had never had a case.

With reference to the use of Dobell's solution, one might just as well use plain water if he comes in contact with a germ that has as much life in it as the ones we had in the Dyer County epidemic. We found carriers and quarantined them. We sprayed the cases and yet the germ thrived on Dobell's solution, but when we began to use from twenty-five to forty per cent of argyrol after four or five days the examinations of the nose and throat all the germs disappeared, we cleaned the carriers up, and we have not had but three cases of meningitis in the town of Dyersburg since January, 1913, and these were among the negroes who did not take any precautions at all. Of course, all of us agree as to the treatment, and I think where we make a mistake is not giving enough serum and giving it early. I have given as much as 25 c.c. to patients four years of age, where I drew off enough of the fluid to justify the administration of this amount of serum, and if you give them the serum early and give them enough, you will not have to make as many punctures.

As to stimulation of the heart I think there is nothing that will serve the purpose better than the use of digitalin, and for the purpose of elimination nothing is better than large doses of calomel, given repeatedly until you get action of the bowels. It has a special effect on the meninges and helps the elimination of the toxins that are in the system. I have used the serum under the skin, and in the last cases I had where a bacteremia developed all patients dying the germs were found abundantly in the blood of these patients. I cannot say that I have obtained any results from the serum treatment under the skin, because all the cases in which the bacteremia developed died. In Nashville the germ may not have as much life as in those sections of the country with wet bottoms. There may be something in that.

As to complications, I have had more trouble from retention of urine than from any other complication. I have had to catheterize patients very often.

DR. W. E. HIBBETT, Nashville: There are one or two points in these papers to which I wish to call attention. First, the technic of withdrawing the fluid. The doctor spoke of plugging the needle with his finger. Our method is never to

totally withdraw the stylet; we withdraw it until the fluid begins to drip, and never allow a rapid escape of fluid.

We recognized early in the epidemic we went through, that there were two things that should be avoided, and that these two things in combination were almost fatal, namely, the administration of an anesthetic and the rapid withdrawal of the fluid. So we evolved the plan of not entirely withdrawing the stylet, but only drawing it back until the fluid began to drip. If you observe this technic you can continue to withdraw fluid almost indefinitely without untoward symptoms. I must say, in our cases we did not find the blood pressure a sufficiently accurate index to guide us along this line, but where the patients were not comatose, and were at all rational we were governed by their speech and by their feelings and also by the respiration. I believe the respiration is an index to the danger of the patient, and especially is it valuable where we have to do the operation alone. Being guided by the rhythm and character of the respiration we found we could continue the withdrawal of the fluid without danger to the patient.

As to the preparation of the field for operation it must, of course, be made as aseptic as possible. I have a great deal of respect for spinal puncture, but there are some gentlemen who think it does not amount to much. I want to say, if you have occasion to do it very many times you will acquire a respect for the operation. We usually prepare the field by washing it and painting it with iodine.

We have abandoned the use of any local anesthetic. There is very little pain except in introducing the needle through the skin. If you do this particular part of the operation rapidly having outlined the landmarks and introduced the needle between the spinous process there will not be much pain. Much of the pain has been due to puncture of the spinal nerves, which is an indication to withdraw the needle entirely or change its direction.

I think the preventive treatment of cerebro-spinal meningitis has been very much exaggerated, we must now draw final conclusions from observations in one epidemic.

I have had occasion to observe in Nashville during the last winter and spring and also this winter something over 100 cases, from which some of my conclusions are as outlined above. One of the most important things to remember is to withdraw the spinal fluid slowly and to inject the serum very slowly. It is a great mistake for the operator after having introduced the needle to become impatient and hurry. If he does not kill the patient in the withdrawal of the fluid he is apt to produce trouble by the injection.

DR. D. J. ROBERTS, Nashville: I will only say a few words in regard to the treatment. Unquestionably serum therapy is one of the great

developments of the day, and I say, "All hail to Dr. Flexner," yet, there is something to be done by those who are not therapeutic nihilists. I am glad to know that my friend, Dr. Leroy, in opening the subject of treatment alluded to my old standby in this disease in the past and at present, namely, morphia, or some of the alkaloids of opium. Some of you gentlemen may have had occasion to resort to a similar method of treatment. My plan has been for years and is today to place the patient at once under the influence of opium or some one of its alkaloids, preferably morphia. I do not give it cautiously, but give it boldly and freely. My two landmarks are the pupil and the respiration. I give it in sufficiently large doses until it contracts the pupil and acts markedly on the respiration. A few years ago I gave as much as two and a half grains of morphia to a child with well marked and pathognomonic symptoms of cerebro-spinal meningitis two and a half years of age within twenty-four hours, and that child is living today and well, a beautiful and bright young girl perfectly normal in development.

Another one of the old drugs Dr. Leroy has alluded to is the iodide. As soon as the disease is well under control (I am referring now to the acute stage), I give them iodide of potassium in full doses to get rid of the toxic products—more especially the exudation which usually so often proves worse than death itself.

DR. OLIN WEST, Nashville: I want to say just a word or two for a specific purpose, one of which is to compliment Dr. Weaver, Dr. Harris and Dr. Tucker and Dr. Litterer, who jointly handled the situation at the Tennessee Industrial School when cerebro-spinal meningitis was epidemic there. I have tried to find some instance in literature where such results were obtained as were obtained in this institution and have been unable to do so. I think these gentlemen ought to be commended by the society for their zealous care and earnest work and the promptitude with which they handled the situation as it developed in that epidemic.

The greatest lesson I got from Dr. Weaver's paper was the necessity for the early use of the serum. I know that is not observed today in general practice. I know it is hard to persuade people who must have lumbar puncture made, yet I do believe the average physician can persuade the people to have these punctures done earlier if they would just assure them that there is comparatively small chance of harm from the puncture.

I hope nobody is discouraged by Dr. Hibbett's remark, that he has learned to have a great deal of respect for the lumbar puncture. It is true, occasionally, a man has a little trouble in getting into the canal, but I have never seen anyone fail absolutely. A great many, however, fear the operation and believe from the start that they are un-

able to get into the canal. I have no hesitancy in saying that cases have died because individual physicians refused to make an effort to get into the spinal canal.

I would like to make the further point, that I believe general quarantine against meningitis is absolutely inefficient and unworthy, because if you should quarantine against it strictly, you do nothing more than to shut up the cases you have and the carriers. I believe in the isolation of each specific case, limiting the communication between any of the folks in every place.

I believe that the spray as an aid in the prevention of this disease seems to have been established to a certainty, and that argyrol is the most efficient agent.

DR. THOMAS WEAVER, Nashville: I was very glad to hear Dr. Thayer, from Mobile, speak so highly of the vaccines. We have had hardly any experience with vaccines in our epidemics. We have been using the vaccines in one case, and I am very glad to say that the temperature is normal today for the first time. She received the first dose of vaccines a few days ago.

As to the use of morphine, we do not find it necessary to use it in all our cases. To one woman of nervous temperament we gave one-eighth of a grain of morphine, which had a happy effect.

As I have said, we are always careful in withdrawing the fluid. We do not always leave the stylet in all the time, but we are careful to leave it in until the fluid drips slowly. If the fluid should flow too rapidly we are careful to leave the stylet in. We have noticed this effect in injecting the serum, even though it is injected slowly and carefully sometimes the pulse would stop. I was fortunate enough to have an assistant who watched the pulse carefully, and whenever there was a slowing of the pulse or a marked weakening the injection was discontinued and the pulse came around in a short time.

I failed to mention in my paper that we have had several cases of herpes of the lip. We also had a few cases of arthritis of mild degree.

DR. WILLIAM LITTERER, Nashville: Concerning the vitality of the micro-organism, of course it will vary very greatly in epidemics. It may be true that the meningococcus of Dyersburg is much more long-lived than the meningococcus in Nashville. The diplococcus crassus, the pseudo-meningococcus, the micrococcus catarrhalis, and the varied allied organisms are much more longer lived and have much more vitality than the ordinary meningococcus. It is no easy matter to differentiate the various micrococci that are found in the nose and throat from the meningococcus of Weichselbaum. The mere staining it and growing on the ordinary culture media will not hold. Fermentation, agglutination, absorption tests as well as deviation of the complement must be resorted to before one is

sure he is dealing with the true meningococcus.

In my experiments relative to the viability of the meningococci, I examined 56 carriers. From each carrier I obtained the sputum and nasal secretion. Three kind of carriers were selected, viz., (1) Patients, (2) Convalescents, (3) Healthy Carriers. The meningococci were demonstrated in every case. The sputa and nasal secretions were allowed to dry and cultures were made from the dried secretions, with the result that all of the meningococci had died. Thereby proving that drying readily kills the meningococci.

Dr. Leroy mentioned hexamethylenamine. I simply speak of it to condemn it. Dr. Thayer made valuable observations in connection with the work done in the epidemic at Dallas, in which he found meningococci in the urine of patients who had taken large doses of urotropine. In addition to that, he found that it had produced severe hematuria and various other conditions. I would like for him to speak more definitely on that subject.

As to the use of the spray, I believe the spray is a good thing. The use of a powerful antiseptic is to my mind not so very essential, because it makes no difference how strong we have the spray (argyrol), there are some places in the nose where the spray cannot reach and the germ will later infect the surface. The spray is absolutely indicated, but I do not believe it is going to eliminate in every instance the carrier state. Sprays also serve to prevent infection to others, even when the individual is a pronounced carrier.

As to the treatment of the carrier by vaccines, will say that it is a well known fact that typhoid carriers cannot be satisfactorily treated by the injection of the dead bacilli by using typhoid vaccine. Reasoning from analogy, we have no right to assume for one instant that the meningobacterin has any power to eliminate the carrier state.

DR. E. A. THAYER, Mobile, Ala.: One of the mistakes which was made in the Dallas epidemic was the indiscriminate use and advocacy of large doses of hexamethylenamine, not only by the physicians themselves, but by Thomas Richard Henry, and we reaped a large harvest of damaged kidneys as a result. At the City Hospital, where these cases were treated, they were given hexamethylenamine in considerably large doses, as much as they can stand, and we had hemorrhage urine as a result in a large number of cases. In those I found the living germ excreted and recovered it in pure culture, but I also found the micro-organism in other urines, so that I do not think the hexamethylenamine is excreted. So far as my own experience goes, I would not myself take urotropine in any large doses nor in small ones hoping to get results. The contention of the gentleman who first introduced it there was

that it would be excreted into the spinal canal and into the ventricles of the brain, and would likely kill the germ there.

The vaccine unfortunately that has been put upon the market is not altogether trustworthy in my opinion, for the reason it is sterilized at too high a temperature. I found as a result of my work in vaccines in Dallas that 45 degrees was the best temperature, and that a vaccine sterilized at 45 degrees was far more powerful than one made at a higher temperature. The disappointment in the treatment of some cases has been due to that mistake in its preparation. Possibly the solution acts differently in the human being than from what it does in animals.

From observations I have made, I should say there is a close relationship between the human and animal disease. There is something yet to be worked out that will explain how people will contract this disease without any apparent contact with another human case.

Speaking of the dry coccus, my own feeling is there are different strains. I think laboratory work has shown that the meningococcus has two types, so that there are different strains of these cocci, some being far more resistant and toxic than the others. If a person who has in his nose and throat a virulent resistant organism should spit upon the street and the sputum is dragged up into the skirts and in a dry state is finally inhaled, infection may be conveyed in that way, but not so commonly as one is led to suppose.

As to the serum treatment, the chief value it has is as an opsonin. It may be of some use, if you cannot find a specific serum, to use any other serum. Diphtheria antitoxin is a serum that will work, and the plain normal horse serum will work, so that if a patient is in need of serum treatment, if you can get any serum, use it rather than let the patient go without serum treatment.

DR. LEROY, Memphis (closing the discussion): I am familiar with the action of hexamethylenamine, and in the use of it. I do not expect the sterilization of either the spinal cord or urine, but I believe it is a fact that a certain amount of formalin is excreted by the spinal cord and gall-bladder and in the urine. My own conception of that in that connection is that it acts in a measure as an inhibitory agent in retarding the rapidity of growth of the organism, not as a cure by any means, but as a slight additional inhibition. I am convinced that it is of value, for example, in gonorrheal infections. It is of some value in the chronic latent infections in typhoid. I do not believe it is a sterilizing agent, but I use it for its inhibitory action, and it is only with that hope that I commend the use of it at least temporarily.

So far as the discrepancies in the results of vaccines are concerned, I believe the race of or-

ganism used has a great deal to do with it, and where autogenous vaccines can be used better results will be obtained. I believe also our stock meningococcus vaccines will be polyvalent, the same as pneumococcic serums or vaccines are polyvalent. One strain will have but little action on a given patient. Where the autogenous vaccines are used, more definite results will be obtained.

One other suggestion: You will get, I believe, better results, less irritation and more comfort to the patient, if you will warm the serum up to the body temperature before its injection. It takes but a moment to drop the package in warm water at about 101 degrees, and by the time you are ready to use the serum it is at the temperature of the body, it is somewhat less irritating than if you use it a way down so that it is cold to the touch.

TONSILLECTOMY AND TONSILLAR HEMORRHAGE.*

By Richmond McKinney, M.D.,

Memphis.

Professor of Diseases of the Nose, Throat and Ear, University of Tennessee College of Medicine; Oto-Laryngologist to City Hospital, Baptist Memorial Hospital and Lucy Brinkley Hospital.

Since the establishment of tonsillectomy as a definite surgical procedure, one of the arguments most frequently brought against its performance as an operation of election over the old method of tonsil clipping, or tonsillotomy, has been that severe hemorrhage more frequently follows the radical method of tonsil enucleation. This is argued as a possible eventuality that would discourage the timorous in the performance of the operation, and would drive those less daring surgically to the use of the old method, which, while oftentimes incomplete as to thoroughness of removal of diseased tissue, and unsatisfactory insofar as the prevention of further inflammatory conditions in and about the tonsils is concerned, yet is regarded by its advocates as safer and less likely to cause hemorrhage than is tonsillectomy. And tonsillotomy appeals in other respects, for it comparatively

is so much easier of performance, and requires so little surgical skill, that almost any one can do the operation, whereas tonsillectomy, when properly done, is an operation that demands technical exactness and surgical instinct.

Anyone who does much tonsil surgery sooner or later will have hemorrhage to deal with, and I doubt if there is anything which will cause a physician more anxiety, and dispose him more to wish that he had never engaged in the practice of medicine than a severe case of tonsillar hemorrhage. Whether it be a steady ooze or a spurting, such hemorrhage is difficult to control through inaccessibility, and if the patient is no longer under an anesthetic, the difficulties encountered in a frightened and struggling child who is having a tonsillar hemorrhage can be conceived most appreciatively by one who has gone through this experience.

Prior to my beginning the use of tonsillectomy, I had done many hundreds of tonsillotomies with the old McKenzie or Physick tonsillotome, and during that time I had several cases of quite severe bleeding following the operation. Since beginning to practice tonsillectomy, some four or five years ago, I have had but four cases of hemorrhage severe enough to occasion much concern on my part, yet I would be quite content to go through the remainder of my professional years, or days, without similar experience. Three of these cases, coming quite recently, I will report in detail before I offer any conclusions of others or of my own concerning the subject of hemorrhage after tonsillectomy.

In December, 1912, Ernest R., aged 9 years, a mulatto boy, was sent to my service at the Memphis City Hospital, and at 8:30 the next morning, under ether, tonsils and adenoids were removed by me, the tonsils being freed from adhesions and snared out. Both tonsils apparently were removed entirely, the capsule being well defined over each. The throat was carefully examined for hemorrhage before the child was removed from the table, but there was no bleeding at all when he was removed to the ward. About 3 o'clock in the afternoon, one of the internes telephoned me that the boy had been bleeding since shortly

*Read before Tennessee State Medical Association, April, 1913.

after I left the hospital, and that the blood seemed to be coming quite freely. I told him to use ice and compression, and to let me know in a little while if the hemorrhage had not ceased, and that I would drop everything and immediately go to the hospital. Not hearing from the interne by 4 o'clock, which is the end of my office hours, I 'phoned to the hospital to inquire concerning the boy and was told that he was all right. About 6 o'clock, on my way home, I stopped by the hospital to inquire as to the boy's condition, and one of the internes told me that he had been bleeding all afternoon, the hemorrhage stopping occasionally and then beginning anew. I hastened to the ward and found the boy on his knees in bed, expectorating quantities of bright red blood. He was nervous and very weak. Realizing the necessity for immediate action, I had him placed on a stretcher and taken to an operating room, where chloroform was administered. As soon as the child was relaxed I inserted a gag and found blood oozing freely from the right fossa tonsillaris, and also from the nasopharynx. There was no spurting, but a steady flow of blood. I packed the nasopharynx with a gauze sponge, and applied a Boettcher tonsil hemostat to the right fossa. These measures seemed to control the bleeding, and the boy was returned to the ward. He was given an eighth of a grain of morphine and 150 of atropin hypodermically, and a quart of normal saline solution by hypodermoclysis, this solution containing about two drams of the standard adrenalin solution. At 8 o'clock the boy's condition was reported as fair, no further bleeding, but a very quick pulse. At 1 o'clock in the morning I was telephoned by the night nurse on duty in this ward, who said that the boy had vomited a quantity of blood, and perhaps was swallowing a good deal of blood. I told her to give him another hypodermic of morphine and atropin, and if he continued to bleed to again telephone me. I was of the opinion then that the vomited blood had accumulated in his stomach from previous bleeding. The next morning, at 8 o'clock, I went by the hospital and was informed that during the night the boy had got out of bed, removed the tonsil hemostat, and had gone to the toilet. However, he had

not bled any since the previous evening. Apart from quite a large amount of edema resulting from pressure of the hemostat over the external carotid artery, convalescence in this case was uneventful.

On November 23, 1912, at the Luey Brinkley Hospital, with local anesthesia, I removed large, discrete faucial tonsils from Miss L. R., aged 23 years. She bled rather freely from the right fossa tonsillaris at the time of removal of the tonsil, but before I left the hospital there was no bleeding at all from either side. At 12 o'clock, some three hours after the operation, the head nurse at the hospital telephoned me that Miss R. was bleeding profusely, and that she had been doing so for some time. I hastened out to the hospital, and upon examination of the throat found that there was a slight oozing from the right fossa tonsillaris, but the hemorrhage had almost ceased. The young lady had, however, lost quite a quantity of blood, which was to be seen in the various vessels into which she had expectorated, although the pulse did not evidence this fact. As a precautionary measure, I applied a Boettcher tonsil hemostat to the bleeding locality, and apart from a false alarm turned in for me about 7 o'clock by the special nurse watching the case, occasioned by the patient's spitting a mouthful or two of blood, there was no further trouble in this case, and I removed the hemostat the next morning.

The original draft of this article had been completed when my third case of hemorrhage following tonsillectomy occurred, and this last case in the most interesting of the three, since it was one of delayed secondary hemorrhage coming on seven days after operation.

Miss K., 18 years of age, who had been subject to repeated attacks of acute lacunar tonsillitis resulting frequently in peritonsillar abscess, had her tonsils removed, under ether anesthesia, by me at the Baptist Memorial Hospital on the morning of March 29th, this year. The right tonsil was cleanly and completely enucleated in capsule, but the left tonsil was of the submerged type, very ragged from previous inflammatory attacks, and was quite difficult to remove. A portion of the lower lobe remained after the upper part of

the tonsil was removed with a snare, and I used a tonsil punch for cutting this away. This tonsil bled more freely than the right, but there was no hemorrhage when the patient left the table. The second morning after—31st—Miss K. left the hospital, and that afternoon came to my office, saying that she was going to a matinee. I advised her to return home and keep quiet, but am afraid that she did not do as directed. On the morning of April 3rd, she came to the office, and said that she had returned to work, being employed as a stenographer, but that her throat was quite sore. Examination showed nothing abnormal, and I advised her to return home and keep quiet for a while longer. The next morning she came to the office and said that at midnight she was awakened by the sensation of having fluid in her mouth, and expectorated a quantity of blood. Her family physician was called and found some oozing from the left tonsil. He applied alcohol to this, and advised the use of an ice bag with crushed ice in the mouth. She said that she had expectorated blood at frequent intervals during the remainder of the night, but there was not a free hemorrhage. Upon examination of the throat, I found blood oozing from the lower portion of the left tonsillar fossa, where I could see a small piece of tissue remaining. I sent her to the hospital, and had an ice bag continuously applied, with crushed ice in the mouth. When I saw her late in the afternoon the oozing had about ceased, and there was no indication for applying a clamp. A hypodermic of morphin and atropin was given her, and the next morning there was no hemorrhage at all. The hemorrhage evidently was caused from a slough opening up the mouths of the vessels.

In all of these cases, in seeking cause for the bleeding, I found that in each patient a small portion of the inferior lobe of the tonsil remained, and it was from this that the bleeding apparently came. While I make a practice in my tonsillectomies of going back for any vestige of remaining tissue with punch forceps, sometimes, although the tonsil seems to be removed intact so far as the capsule is concerned, there may be a small portion of tissue from the base of the tonsil

remaining. It is a singular coincidence that this was true in all of these cases of hemorrhage, and in the time that I had been doing tonsillectomies, with a considerable number of these operations performed, I have never had troublesome hemorrhage where the tonsil was removed quite cleanly. This is probably explained through the fact that when the tonsil is removed en masse there are no gaping vessels left, as may be the case if a portion of the tonsil remains, and as is usually true when tonsillotomy is done.

It is interesting to turn to a discussion of the subject of tonsillectomy and hemorrhage, which took place at a meeting of the Vienna Laryngo-Rhinological Society, in April, 1912, and a full translation of which I should like very much to give here, were it not so extensive. In this discussion a number of the leading nose and throat men of Vienna participated, the collective experience of some of the best Vienna clinicians in nose and throat work being thus obtained.

One of those participating in the discussion, Dr. Tenzer, in discussing the subject of the arterial supply of the tonsils, said that he regarded the traditional theory of Zuckerkandl as being on a very weak basis. Zuckerkandl says that on the capsule of the tonsil is found a two-fold distribution of the arteries: (1) The vessel runs on to the tonsil, and penetrates the fibrous wall in a direct or oblique direction, running thence into the parenchyma. The connection between the peripheral vessel walls and the fibrous capsule is intimate. (2) The vessel runs on to the tonsil, but does not immediately pass through the capsule, but attaches itself to this, and only after giving off a number of turns does it enter the tonsil; also there exists an intimate relationship between the wall of the vessel and the covering of the tonsil. After the tonsillar artery has passed the capsule, the very nearly millimeter thick vessel resolves itself into a bundle of thread-like twigs. The tonsillar artery ceases to exist after passing the pharyngeal tonsillar wall.

Zuckerkandl holds that this relation of the tonsillar artery to the fibrous covering of the tonsil is important in the causing of bleeding for the following reasons: If the cut which

releases the tonsil passes through the back portion of the capsule, spontaneous arrest of hemorrhage is not possible, owing to the intimate relation between the vessel wall and the thick, fibrous tonsil capsule, which prevents the reaction as well as contraction of the vessels, which, through being adherent to the tonsil, are held open. When one thinks of the size of the lumen of a dilated tonsillar artery, so is it made clear how severe manifestations of hemorrhage may result, even after a long time. Contrary to this representation of the relation of the artery to the capsule, Tenzer said he would cite the opinion of Meckl, who says: "Every artery which runs through firm tissue, whether it be hard connective tissue, cartilage, bone or a hard gland, lies in a tube that is supplied with loose connective tissue, which is necessary since every pulse beat causes a contraction of the vessel, which would be impossible if the artery was grown fast with the surrounding tissue. It would be necessary for the muscular structure of the artery to atrophy, which never occurs."

By means of injecting the external carotid artery with Teichmann's mass, after previous ligation of its small branches, Tenzer was able to show five preparations from children approaching puberty. It is remarkable that in none of these was found an independent, millimeter thick branch of the tonsillar artery entering into the tonsil, but there was seen quite a number of very fine arterial twigs, shown only through the injection, which at different places enter the tonsil. This condition was seen in all five of these preparations, taken at random. Tenzer says he believes that no one will receive the impression from these specimens that a single vessel of anyways mentionable lumen enters the tonsil. If this condition of the tonsillar artery, shown in these preparations, is typical, the theory of Zukerkandl is excluded.

Tenzer's observations harmonize with mine. I have examined a great many enucleated tonsils with a view to ascertaining their blood supply, and even with a low-power objective, microscopically could find no vessel of any mentionable size entering either the capsule or parenchyma. Macroscopically one can us-

ually see several minute hemorrhagic spots in the base of the enucleated tonsil, showing where vessels had been severed, but none of millimeter thickness.

Prof. Hajek said that we are chiefly concerned as to whether hemorrhage following tonsillectomy occurs especially frequently and in severe form. Statistics so far show that danger from hemorrhage is very slight, but this may occur. In his first nearly two hundred tonsillectomies he had no hemorrhage, and then in a relatively short time had two cases of quite intense bleeding, and these in adults.

Tschiasny said that he had done a large number of enucleations, but had had so far only three hemorrhages. These were all in clinic patients, who left the clinic immediately after operation, and although the ages were not given, the description of the cases would lead to the belief that these patients were not young children. In describing one case, who had a severe hemorrhage on the eighth day after operation, in which it was necessary to use a Mickulicz clamp, Tschiasny says that this case serves as a warning not to let a patient go from observation too soon after tonsillectomy. He thinks it would be advisable to keep the patient under observation for fourteen days. He said further that not infrequently during operation he had seen arterial bleeding coming from the faucial pillars, which ceased after enucleation was ended, and that where hemorrhage is encountered it is better to complete the operation, since so long as the tonsil hangs to the tissues contraction of the vessels is made more difficult, hemorrhage usually stopping after the operation is completed.

The experience of most of those participating in the discussion was that hemorrhage after tonsillectomy in young children is rarely encountered, and more frequently is seen in adults, but even here is rather infrequent. This harmonizes with my own experience in doing tonsillectomies, for I have never had a severe hemorrhage following this operation in a young child, those cases that I have encountered being in older children, the youngest of these being that of Ernest R., 9 years old, already reported. It is not an unusual

experience with me to have rather persistent bleeding at the time of operation, sometimes to an annoying extent, but this usually ceases when compression with gauze sponges held in a sponge forceps is practiced for a few moments. This bleeding as a rule is in the form of free oozing, and I cannot recall when I have had pronounced arterial bleeding, as evidenced by a spurting vessel.

Turning again to the discussion from which I have been so freely quoting, I find that several of those participating had experienced severe hemorrhage following tonsillotomy, and post-operative hemorrhage was reported by a number, this being ascribed by them to sloughing of the wound, thus opening the vessels anew.

Marschik, an assistant in Chiari's clinic, whose contributions to nose and throat literature I have always found interesting and valuable, says that there has been an increase of hemorrhage following tonsil operations since the beginning of the use of tonsilleectomy in the Vienna clinic. This occurs always where cutting instruments have been used, where portions of the capsule have remained, or where there has been too much removal of tissue external to the capsule in the neighborhood of the large vessel stems. This agrees with my experience as to the cause of hemorrhage, which I have already stated in the three cases reported by me, was probably due to a portion of the tonsil remaining. I think wounding of the pillars, especially the anterior of the fauces, is well calculated to cause hemorrhage, and for this reason, and also in order to prevent annoying cicatricial contractions, I am careful to avoid wounding the pillars in encircling the tonsils.

In America, where tonsilleectomy so generally is done, reliable statistics as to the occurrence of hemorrhage are difficult to obtain, but from the literature the conclusion can be arrived at that the operators of large experience are not finding any increase in the frequency or quantity of bleeding in these cases. Shuder (*), in a recent article, says that with his method of tonsilleectomy, the average bleeding in 310 children from two to fifteen years old was 70 c. c. (4 1-3 tablespoonfuls)

for both faucial and pharyngeal tonsils. How he was able to so accurately measure the quantity of blood, I cannot understand. My own operative experience with tonsilleectomy goes back about five years, and to compile the records of my private cases would necessitate going through my entire nose, throat and ear records for this period, and it would be impossible to compile the records of my charity services at the City, Baptist and Luey Brinkley Hospitals, yet I believe a conservative estimate of the number done would be between 800 and 1,000 cases, so I think four severe tonsillar hemorrhages in this number is a very satisfactory showing for the operation of tonsilleectomy.

Before leaving this subject I wish to discuss briefly the methods for controlling tonsillar hemorrhage. In slight post-operative bleeding it is customary to use ordinary means, such as an ice bag to the neck, crushed ice in the mouth, the application of adrenalin solutions, which are washed away so quickly as to be of no value, and hypodermies of morphin and atropin, but where the bleeding is severe we are driven to the practice of more radical procedures. Compression with gauze sponges held in sponge-holders and constantly maintained will sometimes bring about arrest of an annoying hemorrhage at the time of operation, but when the hemorrhage is post-operative, and the patient is from under the anesthetic, we are confronted with a condition that is likely to prove trying to anyone and sometimes makes the stoutest surgical heart quail and have a form of "stage fright." In children it becomes necessary to put them under a general anesthetic, and here chloroform has a decided advantage over ether, being taken with less struggle, and having less effect in increasing blood pressure. If there is a bleeding point definitely ascertained, and not a general ooze, as has been my experience, the application of an artery forceps and a ligature may arrest the hemorrhage, and this seems to be a favored procedure with the Austrian clinicians whom I have been quoting, but unless it is a wound of a pillar, I have never been able to pick out the bleeding point with the facility

with which some operators claim they can do. Suturing of the pillars is not at all easy to do, and in the presence of a free hemorrhage the effort to get a curved needle from one pillar to the other, and then to tie the suture deep down in the constricted cavity presented by a child's throat, is a procedure that could not be characterized as an easy one. With Mosher's long, curved needles and suture carrier, this is more readily done, but under any circumstances the procedure is not one of choice, although it is very satisfactory as a means of arresting hemorrhage. Michel clamps are used by some surgeons, but they are exceedingly painful afterward, and sometimes tear through the tissues and act as additional traumata in producing hemorrhage. Most of these cases will yield to constantly maintained pressure, but the application of pressure with sponges held in forceps soon grows tiresome, and therefore we must resort to mechanical means for obtaining this necessary pressure. There are several kinds of tonsil hemostats or clamps made, and the one that I use is Boettcher's, which is not very heavy, fits nicely, and by means of a set screw any degree of pressure desired may be obtained. This mechanical application of pressure is uncomfortable for the patient, and in young children it may be necessary to strap their hands to the bed in order to prevent their releasing the instrument, but when we are confronted with tonsillar hemorrhage we scarcely can consider the immediate comfort of the patient, their remote welfare being the prime object of our solicitude. Preobraschen-ski suggests that wooden sticks wound with cotton at the end be held against the bleeding locality by the patient holding the end of the stick in the teeth. This might be used in adults, but could never be practiced in young children. If mechanical pressure with a tonsil hemostat does not suffice to control the hemorrhage, suturing of the faucial pillars is the most serviceable resort. Ligation of the external carotid occasionally must be done in order to arrest hemorrhage, but I hope that none of my auditors may ever be required to put this method into execution.

Before closing, I should like to report a case of tonsillar hemorrhage that has no im-

mediate connection with the subject at hand, since it was not the result of either a tonsillectomy or tonsilleotomy, but from an incision made for relief of a peritonsillar abscess. The method used to arrest hemorrhage in this case is my reason for reporting it.

Dr. McM., of Memphis, aged 28, blonde in type, was seen by a colleague for a peritonsillar abscess of the left side. An incision was made high up in the supratonsillar region of this side, following which hemorrhage was quite marked for several hours. A 20 per cent solution of argyrol was also used in the throat at this time. The hemorrhage ceased after a while, but began again during the night, and I was 'phoned for, but was not at home at the time. The next morning I was asked to see Dr. McM., and called at his residence, finding him still spitting blood rather freely. Local astringents were used by me, and the patient put to bed with an ice pack to the neck and crushed ice advised by the mouth. There was very little bleeding until the afternoon of the second day after this, the patient apparently improving greatly, with almost complete subsidence of a high fever that he had been having, but toward evening of that day he again began to spit up blood, and this increased in quantity throughout the night and up until noon of the following day. At this time I was again called to see him, and having found the bleeding point practically beyond reach of such means as I had been employing to arrest the hemorrhage, I conceived the idea of using a post-nasal packing on this side of sufficient size to press the posterior faucial pillar against the wound, with the idea of arresting hemorrhage through pressure thus obtained. Using the customary method of running a catheter through the naris and tying a thick silk thread to it, I drew a large gauze sponge firmly up into the choana, and found that my idea had resulted in practical success, for the pressure was ample to arrest hemorrhage, and was maintained without any difficulty whatsoever. A few hours later the tampon was removed, and recovery was uninterrupted thereafter. Dr. McM. informed me, however, that he was so thirsty afterward that

he drank twelve glasses of water during the first hour following removal of the packing.

Memphis Trust Building.

DISCUSSION.

DR. GEORGE H. PRICE, Nashville: I am very glad indeed that Dr. McKinney has presented this paper and has given us his experience with hemorrhage following tonsillectomy. It is true, that this method of procedure, so far as dealing with the tonsils is concerned, has within the last few years been regarded as the most desirable, and perhaps it is, and yet there are some reasons why under certain conditions it may not be resorted to and should not be resorted to, and there are reasons why some other procedure may suffice.

So far as tonsillectomy is concerned, as detailed in the paper read by Dr. McKinney, I myself do not resort to it. I have succeeded in removing practically the entire tonsil with the ordinary tonsilotome, the MacKenzie instrument. I have sometimes used the guillotine. I have sometimes used the cold wire snare. I have yet to see a single patient ever operated on by any operator that came under my observation that had a tonsillectomy performed that did not have some tonsillar tissue afterwards. I have seen within the last month or two several such patients. It is almost an impossibility to clean out absolutely beyond a doubt, from the tonsillar fossa, every bit of tissue and not infrequently a part of the tonsillar tissue is left. If it were entirely desirable and altogether the thing to do to get rid of the tonsils, the tonsils would not have been placed between the pillars of the fauces. I am not a believer in or an advocate of so-called complete tonsillectomy under all conditions and circumstances. It is true, that we do not have excessive hemorrhage in very case nor indeed in a large majority of cases, but the experience related by Dr. McKinney in his paper, is enough within itself to make a man feel, as he has described, namely, he was sorry he had undertaken the practice of medicine. Every procedure from the ordinary pressure upon the oozing or more rapidly bleeding vessels at times has in some instances failed, and sometimes these patients have come to an untimely end through the instrumentality of an operation that might have been less radical. I have seen some cases in which hemorrhage was pronounced. I have seen other cases in which it was more than pronounced and in which it was really alarming. I have seen these alarming hemorrhages occur in the hands of the most experienced operators during the operative procedure. In fact, the bloodiest operations that I have ever witnessed in my life, for seemingly small surgical procedures, were tonsil operations in the hands of those who were expert in the manipulation of instruments. It is true, the application of the cold wire snare to the tonsil when

it has been enucleated from its bed contained within its capsule and the constricting wire drawn slowly, gives ample opportunity for the majority of the blood vessels to cease bleeding, and the ordinary plug which occurs within the end of the vessel will not infrequently be sufficient to maintain its position without any further trouble and without any subsequent hemorrhage, but now and then a hemorrhage does occur and now and then hemorrhage is serious. I have never had such a hemorrhage myself.

I do not recall but one single case of operation upon the tonsil, and that was in an adult, in which hemorrhage occurred about the fourth day after operation and in which case there was hemorrhage from something like 4 o'clock in the afternoon until 1 or 2 o'clock in the morning. In the meantime the patient lost a considerable quantity of blood, but not enough to be absolutely alarming. The only thing I found to check that hemorrhage was the very procedure suggested by Dr. McKinney, the placing on a tonsillar clamp for the purpose of controlling the bleeding. I have not had any very serious hemorrhages so far as I am concerned, particularly in operating upon the tonsils with the tonsilotome. I have not had a serious hemorrhage from operation in the nasopharynx although I have seen some that did bleed, and in which the hemorrhage was a little more than we might expect. It might be sufficient to make one feel a little uneasy. But I must admit, gentlemen, when it comes to feeling a little uneasy, it is a condition which shows me that I am confronted with the possibilities of something which is not an easy matter to control at times.

The doctor was exceedingly fortunate, and I must congratulate him upon his success, as well as upon the fact that he has not had more hemorrhages than he relates. But I am not an advocate of that method of operating, although I believe it is the accepted method so far as a large number of men are concerned. Abroad tonsillectomy has not taken hold of the profession as it has in this country, and they inveigh against such a procedure.

DR. H. C. CHANCE, Cumberland Gap: It is only by giving our experiences that we learn in regard to these hemorrhages after tonsillectomy and how to control them. I am very forcibly reminded of an experience I had after tonsillectomy.

A young lady, eighteen years of age, was operated on in a hospital at Birmingham. She stayed in the hospital forty-eight hours after the tonsils were removed by the cold wire snare. She came from there to Cumberland Gap, was fifteen hours on the train, was at home about twelve hours more, when the tonsil cavity began to bleed. They didn't pay much attention to it, but the hemorrhage gradually increased. I guess it bled possibly two or three hours with increasing rapidity when I was called. When I got there I tried to have

the young lady hold ice in the mouth. I gave morphia and atropia, and I had learned long ago to rely on atropin for the control of hemorrhage from small vessels, but where the bleeding is quite profuse it does not seem to do much good. Still I used it, and after failing in several attempts to stop the hemorrhage, I wrapped a stick with cotton saturated with one to one thousand solution of adrenalin chloride and had the girl to hold that stick between the teeth with the cotton pressed into the fossa. It stopped. After waiting two or three hours I cleaned out the cavity to find the bleeding point, but could not find it. I could not find where the blood was coming from. There was plainly a piece of tonsil as large as a pea in the upper half of cavity where the tonsil should be. The tonsil began to bleed again forty-eight hours later. I tried the stick again wrapped with cotton and it was a failure. I did not have with me the tonsillar forceps that Dr. McKinney used. I took a silkworm gut suture, introduced it through the anterior and posterior pillars of the fauces, but could not get them together to get complete pressure. I put gauze in the fossa where the tonsil had been removed packing it full of gauze and drew the fauces together over and did not attempt to tie it, but used perforated shot. But that time I was enabled to get pressure on the source of the hemorrhage. After the hemorrhage was arrested I took out the stitch I had put in two or three days before, and removed the remnant of tonsil that was left without any further trouble.

DR. J. MCCHESNEY HOGSHEAD, Chattanooga: Dr. Price has said that he does not believe in every case the tonsils can be dissected out. The reason why they do not perform tonsillectomy in Vienna is because that in children under eight years of age they claim if you remove the upper lobe you can get a good result, and the tonsil contains aberrant lymph vessels which are not interfered with. They also claim that the tonsils have a special function in aiding dentition.

One of the best methods for removing the tonsil I have ever seen is to dissect the pillar and then go over the top of the tonsil next to the capsule with a trivalve speculum, making a blunt dissection. It is very much like the trivalve speculum you use to hold the trachea. It is bent at an angle of forty-five degrees on a long handle to fit into the throat. If you go over the top of the tonsil you can lift it out of the capsule, then place the snare on this, it snares off as a rule, and you will not have any hemorrhage.

DR. M. M. CULLOM, Nashville: This question of tonsillectomy and tonsillotomy is a perennial one. I believe it has been pretty well threshed out. The great majority of men believe that if the tonsil is worth taking out, it is worth taking out entirely. I have found no good reason why we should leave a part of the tonsil, and it

is my effort to get it all out. I may not always succeed, but that is my intention.

Dr. Price said a portion of the tonsil is often left. That was true formerly when the technique of the operation had not been worked out so well as now. Men mistake very often follicular tissue for tonsillar tissue. Any tonsillar cavity will fill up after the tonsil is completely enucleated. The pillars come together and what looks to be tonsillar tissue has been described as purely follicular tissue.

Tonsillectomy in Vienna has very recently come into vogue. Up to within a year or two they did very few tonsillectomies. The first one was done by a San Francisco man several years ago and his patient died, and it gave the operation a black eye there, and they did not practice it for some time, but now they are just as wild about tonsillectomy in Vienna as we are here. They are doing tonsillectomies right along and claim that it is the operation of choice. They are finding that a great many general conditions are due to disease of the tonsils just as we have found. The case against the tonsil instead of getting better, is constantly growing worse. The more we find out about diseased tonsils, the more trouble we find they are responsible for in the day of chronic infections of different kinds. For the worst tonsil, the small submerged tonsil there cannot be any question about the operation that is to be done and that is complete enucleation.

Dr. McKinney's experience regarding hemorrhage is exactly similar to mine. When I used to do tonsillotomies I got an average of three or four hemorrhages every year. That I think was a fair average. Since I have been doing tonsillectomies for three or four years I have had two hemorrhages, and they were comparatively trifling. One hemorrhage came on two hours after operation, and I felt I was in a measure culpable because it was in an adult with a very deep pharynx and rigid jaw. We could not get him to relax entirely, and after I had finished I did not use the care I ordinarily do to see that the tonsillar fossa was dry. Two hours after I left him there was bleeding from the left tonsillar fossa. I put on a clamp and stopped it instantly. I have previously reported these two cases. The other patient was a frail boy, 14 years of age, and at the time of the operation his blood did not clot at all. When I took out the adenoids the blood which ran out into the basin remained as fluid as water, and that boy had some hemorrhage afterwards. I think he lost considerable blood, but with these two exceptions I have not had anything that looks like a hemorrhage since I have been doing tonsillectomies. After I have done a tonsillectomy and made pressure in the fossa until the hemorrhage has stopped and the fossa is clean and dry, I feel very little apprehension in regard to the case. I think a good many cases of tonsil-

lar hemorrhage are the result of oozing which is continuous from the time of removal, but does not attract attention until the patient has lost considerable blood. The first indication of hemorrhage is when the patient vomits a large amount of blood.

These are the cases which repay our careful attention at the time of the operation.

DR. G. C. SAVAGE, Nashville: I want to give a word of advice relative to the control of hemorrhage. If the bleeding is a simple oozing, there is an agent that has not been mentioned here that can be used advantageously, and that agent is alumnol, twenty grains to the ounce of water sprayed on the bleeding surface, it forms a white coating that closes the mouths of the bleeding capillaries, and the hemorrhage in that way is easily controlled in the majority of cases. But where the hemorrhage is alarming, not an oozing hemorrhage, but a running or spurting hemorrhage, then, of course, pressure must be made. Alumnol is one of the best agents for controlling a simple hemorrhage.

DR. E. T. NEWELL, Chattanooga: I am not a nose and throat man, but I do surgery and am interested in the control of hemorrhage. I have had a few cases of hemorrhage after the removal of tonsils. I have one case that is rather unusual and interesting, so I think it is worth while to report it.

A man, forty-five years of age, had a carcinoma of the tonsil. It was about as large as a turkey egg and shut up his pharynx so completely that he could hardly eat or swallow. He came to me for relief. There were a few glands infected in front of the sternocleido mastoid, but most everything he ate, swallowed or attempted to swallow, came out of his nose. He was in a good state of preservation and wanted something done. I consented to remove his tonsil. While looking for this bugaboo hemorrhage we so often hear about, I decided to go down and ligated the external carotid and then by cutting the tonsil in two we were able to get it out. It was so large that I could not get it out without cutting it in two and taking it out in two parts. After removing the tonsil and at the same time cleaning out the glands in the triangles, the patient did very well and went home.

About six months later he presented himself with a condition of the other side which was the same he thought as that when he first came to me, although not quite so large. He still insisted on having something done. He was getting along pretty well, was working, and wanted to live. I did not give him much hope, as the disease had returned in the other side. In this instance I ligated the external carotid on the opposite side and removed the tonsil. He got along pretty well for five months, then came back again, and

had a carcinomatous condition in the vault and the uvula and the whole roof of his mouth. He said he wanted something done for him. As I had ligated both carotids I did not intend to do anything else. He died in three or four months.

In these cases where you cannot stop hemorrhage with tonsillar forceps I see no reason why you should not go down and ligate the external carotid. The blood supply of the tonsil is principally from the tonsillar branch of the ascending pharyngeal. The ascending pharyngeal, tonsillar branch is the one that is usually cut and gives the hemorrhage. Many men think they wound the internal carotid, but that is a good way off, and it is seldom cut in these tonsillar operations. The internal maxillary, one of the terminal branches, sends branches down to the tonsil, and if you could get to the ascending pharyngeal that would be the artery to ligate, but as that is internal and close to the inner side it is better to ligate the external carotid. The circulation is so free between the two sides that simple ligation of one artery often has no effect. You can ligate both arteries and the blood will get from one side to the other in a dozen ways.

Another case recently was one in which a physician had removed the uvula. This patient bled all night; it affected his pulse, and he thought that he was going to bleed to death. In that case after trying local applications, the sprays, and adrenalin internally, and all kinds of styptics, the actual cautery, etc., we had to resort to suturing, we used fine silk, and while it was rather difficult, we succeeded in sewing the mucous membrane of the posterior part of the uvula where it was amputated close up to the anterior, and running a lock suture we got the two sides approximated. We also located a little blood vessel from which the hemorrhage was coming, which was separately ligated. This one we afterwards found out was a bleeder.

DR. RASH, Nashville: Most doctors when they go to do major operations do not look into the general condition of the patients. Some of them even do not do that. A minor operation, a tonsillectomy, is done just as soon as they get an opportunity of doing it without looking into the general condition of the patient, and this not only pertains to tonsillectomy and tonsillectomy, but to all minor operations that some practitioners are doing. I believe a good many of the hemorrhages that are encountered by men who are doing tonsillectomy and tonsillectomy are due to a general condition of the patient—hemophilia, in other words, and in our minor operations we ought to look more into the general condition than doctors are prone to do. I had an experience myself two or three weeks ago in doing a minor operation in which I almost lost the patient from hemophilia. If I had the blood examined and looked into the

history of the case I would never have done the operation.

A good many of these operations are really not indicated; they do not have to be done, but when these operations are done, it is well to look into the general condition of the patient.

DR. McKINNEY (closing the discussion): I was under the impression that my paper dealt with tonsillectomy and hemorrhage following it. I was not comparing tonsillotomy and tonsillectomy. If I had been I should have assumed a different attitude. I thought tonsillectomy was accepted by the majority of representative men in this country, and that the operation was being rapidly adopted in Europe. I did not say that this operation was not performed in Vienna. I said the only time that I saw tonsillectomy done in Berlin, it was performed by an American. I quoted from the proceedings of the Vienna Laryngo-Rhinological Association, and one man alone said he had done 200 tonsillectomies. It shows that it has gained a hold in Europe. In conservative England, they do not like to adopt anything that originates in America. The same is true of Austria and Germany.

The discussion took such a general turn that I thought some of the members might discuss the question of controlling hemorrhage following vaginal hysterectomy, but fortunately we escaped that. (Laughter.) The question I tried to discuss was to compare results so far as hemorrhage is concerned in tonsillectomies and tonsillotomies, and to describe the methods of controlling hemorrhage after tonsillectomy, and to give my experience with hemorrhage after tonsillectomy. In doing tonsillotomy I had more hemorrhage than after tonsillectomy, so that I would no longer consider the former operation. In every case of tonsillectomy in which hemorrhage occurred there was a vestige of the tonsil left. If a complete tonsillectomy had been done there would not have been any hemorrhage.

Dr. Price said he had never seen a tonsil removed entirely. I should like to show him some cases in which I removed the tonsils completely.

Dr. Cullom said a piece of the lower lobe may be left, and it is in such cases we have hemorrhage, but if the tonsil is well dissected with its capsule and all tonsillar tissue removed, there is not much likelihood of hemorrhage occurring.

A REVIEW OF SOME OF THE SURGICAL THEORIES OF INTESTINAL STASIS*

By Richard A. Barr, M.D.,

Nashville, Tenn.

Professor of Surgery, Vanderbilt University
Medical Department.

With a mind which I hope has been open to conviction, I have been making an effort

to locate the surgical status of Pericolic Bands, Caecum Mobile, etc., and I have not been able to thoroughly convince myself that a surgeon can as yet afford to embark on this work unless he has a backing of personal magnetism and all-around optimism that is the possession of a very few. So I would impress on you in advance, that I hold no brief for any special type of ptosis or for any band or membrane.

My object is simply to take a survey of the better known theories of cure by surgery of what ultimately tends to become neurasthenia, since the condition may as well be called by that name as by any other forcibly constructed title. This object is justified, I think, by the frequency with which we hear of diagnosis being made of Jackson's veil, for instance, and surgery done with apparently the same feeling of confidence in both the pathological and surgical significance of the condition that one would feel with regard to acute appendicitis.

That peritoneal ligaments result from inflammatory reaction, and that such ligaments cause, at times, acute or chronic mechanical obstruction, have long been established facts. That twists and kinks of the bowel likewise produce obstruction with typical pathology and symptomatology, is also beyond question. We wish to eliminate from consideration all such cases. We are considering a condition that presents neither the pathology nor the symptomatology of obstruction, though sooner or later mechanical obstruction to the passage of the gastro-intestinal contents is supposed to result from the various alleged pathological entities that have been described and to which gastro-intestinal stasis has been ascribed. This feature of chronic obstruction without its pathology is to my mind the weak point in connection with the surgical suggestions resulting from some of the theories we wish to consider.

The early symptoms and signs of this condition of stasis are difficult, not to say impossible, to distinguish from those of chronic appendicitis. In fact, failure to cure supposed chronic appendicitis by appendectomy has been the determining cause of much of the surgical investigation along this line. As the

*Read before Tennessee State Medical Association, April, 1913.

eases progress downward, the clinical picture becomes more complicated, but it is identically the same, no matter by whom described, and no matter whether it is attributed to abnormal visceral mobility or to preternatural visceral fixation. It is unnecessary to take up your time with a discussion of the symptoms of this stage, as they are simply those long ago described as due to visceroptosis, ultimately justifying the worst that can be inferred from the term *neurasthenia*.

Wilms of Heidelberg, Longyear of Detroit, Lane of London, Jackson of Kansas City, and Coffey of Portland, are the men who have offered the more elaborate and more discussed explanations of some one or all forms of gastro-intestinal stasis, to use the most popular term, and we will take a hurried look at each.

Wilms.—Caecum Mobile: Hausmann, in 1904 first used this term and suggested abnormal mobility of the caecum as a cause of a clinical condition of constipation followed by colic and associated with movable tumor in the right lower quadrant of the abdomen. None of Hausmann's 143 reported cases have been confirmed at operation or autopsy (Sailer A. J. of M. S., February, 1912), and to Wilms of Heidelberg belongs the credit of surgical exploitation of this condition. In 1910 Stierlen (quoted by Frazier, A. of S., Vol. 56, page 594) reported from Wilms' clinic 61 cases treated surgically, with 75 per cent cured, 16 per cent improved, and 9 per cent not improved. The German surgeons have had this field of surgery largely to themselves, and I will quote some opinions expressed (A. of S., vol. 55, pages 161 et seq.) at the Fortieth German Surgical Congress in 1911.

Wilms recommended Bismuth meals and X-ray pictures for diagnosis, claimed 75 per cent of cures for fixation of the caecum behind the peritoneum, but in uncommonly large caeca, recommended **anastomosis between the ileum and transverse colon**.

Sonnenburg of Berlin considered caecum mobile not in itself pathological and that a patient was better off with it than with a fixed caecum. He did not believe we were justified in making a clinical entity of it, and

he had not seen much benefit derived from surgery for it.

Klose of Franfort am Main reported one hundred and fifty-four operated cases, with 89 per cent of cures. He did not agree with Wilms' theory of traction kinking and mechanical obstruction at the Hepatic flexure, but thought torsion of caecum and ascending colon responsible for ill effects. On this theory he fixed the caecum and ascending colon to the lateral abdominal wall and **in severe cases fixed the entire large intestine, the liver and the spleen**.

Dreyer of Breslau has found movable caecum in 67 per cent of a large number of autopsies, and in 89 per cent of women at autopsy. He emphasized the fact that Wilms wanted no shortening of the long caecum when it was fixed.

Voelker of Heidelberg recommended longitudinal plaiting by suturing the middle and outer bands together and at the same time shortening the caecum. Reported satisfactory results in twelve cases.

Surgeons operating for this condition invariably remove the appendix and the part played by appendectomy in cure is, of course, difficult to determine.

Nephro Colo Ptoxis. In 1910, H. W. Longyear of Detroit published a monograph on nephrocoloptosis. A primary dropping of caecum and ascending colon, due to laxity of the peritoneal attachments of the hepatic flexure of colon, with secondary displacement of the kidney through a nephrocolic ligament, is the pathology through which he accounts for many cases of the clinical type under consideration. His treatment is a method of kidney fixation, using the nephrocolic ligament. He reports fifty-six cases, in thirty-eight of which, however, the results of treatment might have been due, to some extent, to other operations done at the time of the nephropexy. Of the fifty-six, forty-eight got regulation of bowel movement to the extent of requiring only petrolatum as a laxative; thirty-eight gained from two to thirty-five pounds in weight; thirty-one got much improvement and twenty slight improvement of nervous condition; thirty-five got complete relief of the abdominal pain, while sixteen

only got partial relief. Radiographs showed little improvement in elevation of colon, and he, for some reason, attributes the good result to **immobilization** of the colon. He frankly states that the conditions presenting in most of those patients demand for their best welfare the utmost they can obtain from the **surgeon, gastro-enterologist, neurologist, psychiatrist and hygienist, and all these must act in harmony.**

Lane's Theory. Arbuthnot Lane eschews chronic intestinal stasis and prefers the term chronic constipation, though it isn't comprehensive enough to serve his purpose satisfactorily. After discussing the etiology and pathology of this condition, he states that he has made it clear that the mechanical factor determining the several changes is an overloading of the bowel (particularly of the cecum, as he calls it, viz: the caecum and ascending colon) due to the assumption by civilized man of the erect posture during the greater part of the twenty-four hours. As the result of toxic absorption from this overloading, he finds the development of a degree of poisoning that must be rare in this section of country, possibly due to our rather feeble civilization. His description of the skin of these subjects will give us an index to the general condition. He says the skin is "thin, sticky, inelastic, abnormally dark and dirty looking." "The skin of the hands and feet is dark, cold and clammy, while that covering the back part of the upper arm is thick, coarse and blotchy in color." Later the skin becomes "**permanently dirtier than normal.**" In advanced stages the skin has a peculiarly objectionable smell, and when the flesh is incised it has also a disagreeable, earthy odor. This is not all he says about the skin, but it will suffice to give you an idea of the toxæmia. He considers that this toxæmia makes the sufferers from it more ready victims to tuberculosis, rheumatoid arthritis, gout, gastric ulcer and other diseases. He also believes that it leads to sterility, and to cystic degeneration and cancer of the breast.

Lane's treatment is Ileo Sigmoidostomy with, in addition, resection of the large bowel above the sigmoid in selected cases. In addition to this, it may be necessary for him to

break up adhesions about pylorus and gall bladder, do gastro-enterostomy, fix the kidneys, break up adhesions among the small intestines or do anastomosis between coils of small intestine, and at times he has had to shorten the meso-sigmoid or even excise that part of the gut (Sigmoid). All these operations are, of course, not necessarily done at one sitting.

Jackson's Veil. In 1908, Jabez N. Jackson described under the title, "Membranous Pericolitis," a membrane or veil attached to the lateral wall of the abdomen or under the surface of the liver, and from this attachment spreading upward, inward or downward over the ascending colon. The only specimen of this veil of which he furnished a pathological report was described by Dr. F. J. Hall as arising in and continuous with the parietal peritoneum. "The entire structure seems to be peritoneum loosened from its close connection with the abdominal wall and colonic surface by some serous exudate, after which the particular vascularization and connective tissue banding has occurred as a chronic reaction to irritative influence." He also stated that the endothelial layer of the serous coat was clearly demonstrated as a covering for all structures. Dr. Hall still further reported that in this case there were no microscopical evidences of disease in the muscular, submucous or mucous coat of gut and no fibrin, polymorphonuclear leucocytes, or other evidence of inflammation.

This pathological report and the fact that I have observed, more or less marked, the same membrane in numerous cases of abdominal section for various conditions without symptoms that could possibly be attributed to it, convinces me that Jackson has described a rather usual variation in the attachment of the peritoneum to the colon, and one that has per se no pathological significance whatever. It is very possible that when atony and distension of the colon occur from any cause the connective tissue in the peritoneum may become increased in amount in certain areas, and being unyielding, cause apparent obstruction where the gut hangs over it, so to speak.

Jackson, himself, inclines to the belief that

varied causes may be responsible for the production of the membrane. He reports one case in which a perfectly solid and opaque sheet of fibrous tissue covered the ascending colon and hepatic flexure in such wise that they could not be recognized. This case should not have been classed with those having the Pterygium-like diaphanous veil that is typical of the condition he describes. He must stand or fall on the veil described by Hall. The connective tissue type goes back to Virchow, or even beyond. He is now of the opinion that dissecting off the membrane as he originally suggested should not be followed as a routine. Removal of the membrane, supplemented by caecal plication (*Caecum Mobile* once more), is his method of choice in the majority of cases. Exceptionally **plastic anastomosis or excision** (concession to Lane) may be demanded. He urges "**vigorous after-treatment.**"

Though Jackson reports no cases in his latest article, *Annals of Surgery*, March, 1913, with comical inconsistency, he says, in speaking of the German methods of treating caecum mobile: "We would like, therefore, to know the remote results of such means alone before accepting them as logical surgical procedures."

Coffey's Theory. R. C. Coffey of Portland, Oregon, (S. G. and O., Oct., 1912) considers gastro-intestinal stasis from other causes than strictural or ulcerative conditions to be the result of ptosis, in turn due to deficient peritoneal fusion. He describes a right-sided ptosis, a midline ptosis, a sigmoid ptosis, and a general ptosis. He considers movable left kidney pathognomic of general ptosis, and he states that general ptosis results in a relief of intestinal stasis with the development of symptoms of general neurasthenia, whatever that may be, evidently, however, not the same as stasis, in his opinion.

He reports forty-one cases with twenty-six symptomatic cases, nine patients much improved, four somewhat improved, one unimproved, and one dead of pneumonia. There were four cases of general ptosis, and all were decidedly improved, but only one was classed as cured. Kidneys, stomach and uterus have all been fixed in these cases of general ptosis

and the upper abdomen expanded. He seems to attribute the failure of complete cure to the fact that he did not fix the ascending and descending colon.

His idea of the surgical treatment of right-sided ptosis with moderately movable kidney is removal of the appendix and fixation of the ascending colon through a right rectus incision, plus fattening. This last is sufficient to take care of the moderately movable kidney. If the right kidney is very movable, the appendix is removed and the kidney and colon both fixed through a posterior incision. **A co-existing pericolic membrane is usually left alone.** He thinks mobile caecum, with or without the membrane, in which the hepatic flexure remains fixed, is best treated by **fixation** of the caecum and ascending colon to the parietal peritoneum.

Midline ptosis he treats surgically by shortening the ligaments of the stomach and liver, suturing the omentum to anterior abdominal wall and expanding the upper abdomen. In certain cases he also contracts the lower abdomen, for which procedure he describes a technic. Sigmoid ptosis producing severe stasis, he says, can only be treated successfully by short circuiting or excision.

General viceroptosis, he says, is not a surgical disease, though all four cases he operated were decidedly improved. The only hope of successful surgical treatment of this condition, in his opinion, lies in prophylactic fixation of the movable colon in childhood.

In all of his cases he has kept the patients on their backs in reversed Trendelenburg position for at least four weeks after operation.

In closing, Coffey wishes to reiterate that only a very small per cent of ptosis cases as they now come to the doctor are surgical, and he concedes that this subject opens up one of the most dangerous fields for surgical abuses. He says that X-ray observation is of inestimable value, but a dangerous agent, as it is convincing to the laity and yet meaningless when considered independently of the history of the case and when not properly interpreted. This last point, with regard to the interpretation of X-ray bismuth meal findings, is important. We are not yet familiar enough with the normal mechanics of diges-

tion to draw safe conclusions as to what is abnormal. We are absolutely dependent on this means of determining and locating stasis, and we have every reason to expect that within a short time studies of the normal subject by this method will put us in a position to recognize the abnormal within a reasonable percentage of error.

My impression gathered from these leaders in the surgery of stasis is that such obstruction as is present in stasis is passive, so to speak, and is the result and sequel of loss of muscular tone. Surgical measures instituted for the **restitution** of tone are likely to prove futile. No amount of fixation, plication, or, on the other hand, mobilization, could reasonably be expected to serve this purpose. Loss of bowel muscle tone when present to a surgical degree can only be rationally treated by exclusion or exsection of the involved gut. In this regard, I believe Mr. Lane is on the right tract, and Wilms, Jackson and Coffey concede as much so far as the worst cases are concerned. Lane quotes one of his detractors as saying, "I shall not attempt to soar with him into the rolling clouds of anatomical and transcendental pathology into which his writings are lifted by an envelope of fact distended by the hydrogen of a strong imagination." As already stated, I believe Lane's surgical measures are of the type that will eventually be proved to be applicable, if any are, in these cases, but I do not feel like shaking hands with the author of the above statement; my mind balks in the effort to follow him through some of the intricacies of his theories.

Another suggestion of fact that can be found running through all of the literature of stasis, and which is strongly contended for by Hertz in the *British Medical Journal*, April 19, 1913, is that in the majority of cases only a comparatively limited area of the colon is involved, and exclusion or resection can be correspondingly limited.

The question of necessity of fixation of the solid viscera, in addition to the gut surgery, is to be determined largely by the amount of interference with function. Coffey's idea of expanding the upper abdomen and contracting the lower may be worth while and the technic is simple.

A suggestion that is often made and apparently with the assurance that it solves the difficulties surrounding this subject, is that we should make a free incision and explore the abdomen thoroughly for pathology. Granting all the possible advantages of the free incision, I hardly see how it can help us determine the pathological significance of these conditions we have been discussing. The question is not so much what we can find, but what can we find that is pathological, and that can be corrected, and how this correction can be done. A free incision will almost certainly reveal some evidence of a Jackson's veil, and is likely to lead to much meddlesome surgery, if Jackson's original suggestion to dissect it off is followed. We should use a free incision, but we should not get an idea that the opening we have made in itself gives a surgical significance to everything we see that does not comport with our ideas of normal anatomy.

In conclusion, I wish to emphasize the fact that while this field probably holds great possibilities from the standpoint of surgery, we must recognize that much work has yet to be done before it is put on an assured basis. In the meantime, let's proceed slowly and carefully avoid irrational surgical exploitation, which will necessarily be followed by a reaction that will postpone the coming of this branch of surgery into what legitimately belongs to it.

MARRIAGES.

The wedding of Miss Polly Prichard and Dr. R. W. Billington was solemnized Wednesday, November 5, at Moore Memorial Church.

The marriage of Dr. M. M. Hannum, formerly of Maryville, but now of Umatilla, Fla., to Miss Luella Merril, of Messina, Fla., took place at the home of the bride, October 1, 1913.

Invitations have been issued to the wedding of Dr. Horace Maynard Taylor, of Greenville, Tenn., to Miss Mary Noel Brabson. The wedding to take place on Wednesday, the fifth of November, at eight o'clock in the evening, at Saint James' Church, Greenville, Tenn.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

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NOVEMBER, 1913

EDITORIALS**ANOTHER FAKE ATTEMPTED.**

RAGSDALE'S

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ALCOHOL 5 PER CENT

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My dear Doctor:

I am sending you this label, which needs explanation, not only to you, but to the whole profession. The formula referred to is a prescription that I gave to a brother-in-law, who is a traveling man out of Memphis, and who was a sufferer from constipation and intestinal toxemia. He, in turn, gave it to some of his friends. The result is that, without asking my permission, not to speak of getting it, they are putting it on the market with my name to it. The formula was not original with me, but is one which is familiar to every one who was ever connected with Dr. Joseph Price in the Philadelphia Dispensary. It is composed of Sodium Sulphate, Magnesium Sulphate and Aromatic Sulphuric Acid, put up in plain

water. The fact that it is composed of things so cheap is, I suspect, their reason for putting it upon the market in this way, as the profit would be immense at the price at which he proposes to sell it. I have written them, demanding that they no longer use my name in connection with it, and I trust you will give space in the Journal to deny any complicity on my part with their schemes. Thanking you for this in advance, I am,

Fraternally yours,

L. E. RAGSDALE.

The above label and letter, which are self-explanatory, were sent to us by Dr. Ragsdale, and we take this opportunity to commend him, for it is becoming much too common for so-called reputable physicians to lend themselves, either openly or under cover, to just such schemes of some over-ardent admirer. While it may be true that, in isolated instances, enormous profit has been made and men have grown rich from the patent medicine business, who later try to soothe their consciences by building streets, libraries and churches, and giving freely to other causes, still we should not forget that their money is illegitimately taken from the pockets of the poor and sick and needy, and no amount of public charity can be a balm of sufficient potency to soothe so stricken a soul. Again we commend Dr. Ragsdale for his upright and professional attitude against this effort to further fake the public.

COLLEGE ENDOWMENTS.

Col. Oliver Hazard Payne has added \$4,000,000 to the endowment of the Cornell University Medical College, making the sum of its funds \$7,000,000. The General Education Board has given \$1,600,000 to Johns Hopkins.

Excellent! Fine! Every dollar given to a college anywhere in this Republic is a help to every citizen of it. That the "Captains of Industry" are generous is splendid.

And we painfully struggle to support our Southern institutions and an occasional gift of \$1,000 or \$5,000 bulks big. It is big, when we consider how few are our wealthy men—how small their wealth is by comparison with the wealth of other sections.—Columbia State.

One of the notable features of the education of the day is towards what is technical and professional. Men are being taught what is useful. Great schools for the advancement

of medical science are especially in demand now. Both Cornell and Johns Hopkins already had famous medical schools. The liberal additional endowments each has recently received will make them greater still.

There is urgent need for a great medical school in the South—nothing of the kind exists in this section compared with what they have in the North. Nashville would be a proper place for a great medical college, and it is to be sincerely hoped that one may some day be located here.

The \$1,000,000 that Mr. Carnegie proposed to give the Medical Department of Vanderbilt University would not by any means make a school on a parity with Johns Hopkins and Cornell, but it would build a richer medical college than any the South has now and make an excellent beginning that would grow with time.

The editorial reproduced above, taken from the Nashville Banner of October 31st, we are pleased to see, is an expression from a layman, and they are fast coming to realize the needs of modern science as it is applied in medicine.

There is, indeed, urgent need for a great medical school in the South, which has already suffered more than its share from the incompetency of her medical men. The day is fast approaching—yea, it is already here—when the intelligent people of our fair Southland demand the best in medical science, and none but the best will they accept, and while it is true that Tennessee is particularly fortunate in having more than her proportion of exceedingly capable physicians and surgeons, still she is woefully lacking in experimental investigators and in men devoting their time to original research. This can only come through endowed institutions, and we trust the day is not far distant when our people may fully realize the necessity therefore.

PATRONIZE OUR ADVERTISERS.

We have repeatedly called the attention of our readers to our advertising pages, and have, in a modest sort of way, insisted upon them patronizing those who are kind enough to give us a small part of their business.

Dear reader, the Journal is as much your property as it that of the writers, and certainly your interest in its welfare should be

just as keen. You are aware that nothing is permitted in our pages except clean, ethical advertising, and you may rely upon any article we permit in our Journal. State Journals are not regarded as good mediums for large advertisers, for the reason, principally, that the members make no effort to boost their own publication. If you order an article by mail, or buy it in person, from one whose ad appears in your Journal, let them know that you appreciate their helping you and that you are reading their ad. This helps us to secure more business and enables us to give you a better Journal.

News Notes and Comment

Dr. John B. Steele has recently undergone an operation at Erlanger Hospital.

Dr. R. P. Harben, formerly of Nashville, has returned to Texas, where he will make his future home. Dr. Harben leaves a host of friends in Nashville who wish him much success in his new location.

Dr. W. F. Preston, formerly of Humboldt, has opened an office in Culleoka.

Dr. Thomas M. Hudson announces the opening of his dental offices in suite 456 Hitchcock Building.

Dr. J. H. Preston, formerly of Humboldt, has moved to Nashville, and is located at 4402 Charlotte Avenue, West Nashville.

Dr. F. Howard King announces his location in Nashville, specializing in Dermatology. His office will be located in the Worthington Flats.

The marriage of Miss Nell LaRue to Mr. David McPeters took place on October 22nd at the residence of the bride's father, Dr. J. A. LaRue, of Pulaski.

Public Health Day at the Conservation Exposition at Knoxville was fittingly observed, with splendid addresses on health topics by

Dr. Wiley, Dr. Witherspoon, and Assistant Surgeon-General, J. W. Trask.

It is to be hoped that a large number from Tennessee will attend the meeting of the Southern Medical Association, to be held at Lexington, Ky., November 17. The program is an excellent one and will be of vital interest to Southern doctors.

Dr. Lucius P. Brown, State Pure Food and Drug Inspector, Wednesday appointed the following assistant inspectors to serve in the department until after December 15, at which time an examination will be held for permanent inspectors: Fleetwood Graver, Nashville; Howard M. Rhea, Somerville, and George G. Draper, Gainesboro. All of these men are graduates of scientific courses in prominent universities, and are said to be fully qualified for the position to which they have been appointed.

Dr. Lucius P. Brown, State Pure Food and Drug Inspector, has received a letter from Dr. H. W. Wiley, of Washington, congratulating him upon the material advance in the Tennessee pure food laws. "The power to close up the unsanitary places," writes Dr. Wiley, "shows a due recognition of an important point heretofore somewhat neglected. The addition of appropriation and force, of course, spells increased efficiency, and I shall be very glad to have you keep me informed as to any special lines of reform that you are able to effect."

The eighteenth annual meeting of the American Academy of Ophthalmology and Oto-Laryngology was held at the Hotel Patton in Chattanooga, October 27-28-29. The wives were entertained at luncheon at the Country Club Monday, and the members and their wives were taken to Chickamauga Park, Fort Oglethorpe, along Crest Road on Mission Ridge, through the National Cemetery, and back to their hotel.

The following officers were elected for the ensuing year: President, Dr. J. M. Ray, Louisville, Ky.; First Vice President, Dr. J. M. Ingersol, Cleveland, O.; Second Vice Presi-

dent, Dr. C. B. Wylie, Morgantown, W. Va.; Third Vice President, Dr. D. C. Longbery, Clarksburg, W. Va.; Secretary, Dr. L. M. Francis, Buffalo, N. Y.; Treasurer, Dr. S. H. Large, Cleveland, O.; Councillor, Dr. Allen Greenwood, Boston, Mass.; Councillor, Dr. Samuel Inglaier, Cincinnati, O.

County Society Proceedings

GREENE COUNTY.

The Greene County Medical Society met in regular quarterly session, in the office of Dr. H. M. Taylor, October 6, 1913, with President M. A. Blanton, M.D., presiding. The minutes of the previous meeting were read and approved. The following members were present: Drs. Huffaker, Woosley, Cloyd, Simpson, Bell, Borden, Brittan, Fox, Hawkins, H. M. Taylor, W. B. Taylor, Blanton, and Lane.

The subject of Medical Defense was taken up and discussed, but was voted down by an almost unanimous vote.

Dr. F. C. Brittan read an excellent paper on "Puerperal Eclampsia," which was discussed by Drs. Woosley, Cloyd, Fox, Bell, and closed by the essayist.

Dr. J. B. Brown read a very interesting paper on "Rhenmatism" in Children," which was discussed by Drs. Hawkins and Simpson, and closed by the essayist.

Dr. Woosley reported a case of monstrosity in an infant.

There being no further business the Society adjourned, to meet in the office of Dr. J. F. Lane, on the first Monday in January, 1914.

After adjournment the members of the Society repaired to the Home Dairy Restaurant as guests of Dr. H. M. Taylor, where an elegant luncheon was served, after which they were invited to visit the Greeneville Hospital and Sanitarium, which invitation was accepted.

J. F. LANE, Secretary-Treasurer.

HAMILTON COUNTY.

The 768 regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order by the

President, H. P. Larimore, at 8 p.m., August 22, with the following members present.

Drs. Cheney, Wallace, Holtzelaw, Larimore, Fowler, Meacham, Fletcher, Allen, Watson, F. T. Smith, Gee, Willard Steele, T. E. Abernathy, Fancher, Wm. Bogart, Barnett, Y. L. Abernathy, J. M. Broyles, McQuillan, Cobleigh, Boone, E. B. Anderson, Haymore, Hochstetter, Ingalls, Hillard, Brooks, Godsmark, Horton, Travis, Renner, and G. Victor Williams.

Minutes of the previous meeting were read and approved. Dr. F. T. Smith read resolutions of condolence to Dr. A. W. Boyd as follows:

Whereas, the Chattanooga Academy of Medicine and Hamilton County Medical Society have read with sadness of the untimely death of Mr. A. Wells Boyd, son of our esteemed colleague, Dr. A. W. Boyd; be it

Resolved, That we extend to Dr. Boyd and family our sincere sympathy and condolence in this their time of sorrow; be it

Resolved, That these resolutions be spread on the minutes, and a copy sent to Dr. Boyd and family.

DRS. FRANK TRESTER SMITH,

J. JEFFERSON GEE,

SAMUEL I. YARNELL,

C. HOLTZCLAW,

Committee.

Dr. Holtzelaw reported case of criminal abortion, which was discussed by Drs. Fancher, Barnett, McQuillan, and Cheney.

Dr. Raymond Wallace reported cases of gunshot wound of the spinal column, renal calculus and tubercular meningitis. Dr. Wallace's cases were discussed by Drs. Cheney, Cobleigh, and McQuillan.

Dr. A. W. Willard read a paper on "Lobar Pneumonia." Discussed by Drs. Haymore, Broyles, Cobleigh, Wm. Bogart, Fancher and Renner. Discussion closed by essayist.

The Society then adjourned.

The 769 regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order by President H. P. Larimore, August 29, 1913, with the following members and visitors present:

Visitors—Drs. Randall, Revington and Walker.

Members—Drs. Renner, McQuillan, J. M. Broyles, Fancher, Wilson, Barnett, Winters, Boone, Cheney, Willard, Steele, Hillard, Gee, Yarnell, Fowler, Holtzelaw, Haskins, Meacham, Wallace, Selden, Larimore, T. E. Abernathy, W. G. Bogart, Travis, Y. L. Abernathy, B. S. Wert, Dunbar, Newell, F. T. Smith, Haymore, Woolford, and G. Victor Williams.

Minutes of the previous meeting were read and approved.

Dr. T. E. Abernathy had a clinic of an interesting case, which was freely discussed by Drs. Cheney, Barnett, and Holtzelaw.

Dr. John B. Haskins had a clinic of gonorrheal arthritis, which was discussed by Drs. Wallace (Dunbar Newell), J. M. Broyles, Fletcher and McQuillan.

Dr. Holtzelaw reported a case of what he believed to be tubal pregnancy.

Dr. Wallace reported a case of intra mural fibroid of uterus.

Dr. Cobleigh read a short abstract on goitre.

Dr. W. G. Bogart, the essayist of the evening, read an interesting paper on "Obstetrical Complications and Emergencies, which was freely discussed by Drs. Selden, Holtzelaw, Woolford, Wert, Barnett and Fancher.

The meeting was then declared adjourned.

The 770th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order, September 5, by President H. P. Larimore, with the following members present:

Drs. T. E. and Y. L. Abernathy, Yarnell, F. T. Smith, Barnett, Travis, Renner, Wert, Fancher, Larimore, G. Victor Williams, Hillard, Brooks, Sullivan and Meacham.

Visitors—Drs. Randall and Dickey.

Minutes of the previous meeting were read and adopted.

Committee on Resolutions made the following report, which was adopted:

Chattanooga, Tenn., September 2, 1913.
To the officers and members of the Chattanooga Academy of Medicine and Hamilton County Medical Society:

Gentlemen: We, your Committee on the death of Dr. R. N. Taylor, beg leave to submit the following report:

Whereas, Dr. R. N. Taylor was born thirty-six years ago, near Benton, Polk County, Tenn., and received his literary education at Benton Academy and Cleveland High School, and was graduated from the Chattanooga Medical College in 1901. Dr. Taylor practiced in Chattanooga up until three or four years ago, when he went West in the hope of arresting the ravages of tuberculosis. He returned to and died in Chattanooga, Tenn., at 12:30 a.m., September 2, 1913; be it

Resolved, By the Chattanooga Academy of Medicine and Hamilton County Medical Society that in the death of Dr. R. N. Taylor the profession has lost one of the brightest members of the Society; a good and useful citizen, and that we deeply deplore his taking off. We can only point the bereaved widow and children to our Heavenly Father who doeth all things well; be it

Resolved, That a copy of these resolutions be sent to the family, and a copy spread on our minutes. Respectfully submitted,

E. T. NEWELL,
C. HOLTZCLAW,
J. H. BARNETT,
T. E. ABERNATHY,
W. H. CHENEY,
J. C. BROOKS,
J. J. GEE,
E. B. WISE.

Talks on the life and work of Dr. Taylor were made by Drs. F. T. Smith, B. S. Wert, G. Victor Williams, J. H. Barnett, B. F. Travis, J. J. Gee, Y. L. Abernathy, T. E. Abernathy, J. C. Brooks, S. I. Yarnell and H. L. Fancher.

There being no further business the Society adjourned.

The 771st regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order by the President, Dr. H. P. Larimore, September 12, 1913, with the following members and visitors present:

Members—Drs. T. E. Abernathy and Y. L. Abernathy, J. H. Atlee, Meacham, Willard, Steele, W. G. Bogart, J. B. Haskins, Stem,

Rathmell, E. B. Anderson, Dunbar Newell, W. M. Bogart, McQuillan, Fowler, E. T. Newell, Barnett, Gee, Boone, Brooks, Richardson, Sullivan, Horton, Shoemaker, Berlin, West, Wise, Fancher, Cheney, F. T. Smith, Yarnell, Blackwell, Hochstetters, Williamson, Renner, Wilson, Long, Wert, Haymore, Watson, Travis, Willas, Wallace, and G. Victor Williams.

Visitors—Drs. Roberts, Randall and Walker.

Minutes of the call meeting of September 2 and regular meeting of September 5, were read and adopted.

Dr. Barnett had a clinic of a boy eleven years old, who was injured eight years ago by being struck with a brick on the ileum, which was followed by tumor. Case was discussed by Drs. Barnett and Dunbar Newell.

Dr. E. T. Newell showed some interesting skiographs of some recent fractures, which he had treated.

Dr. E. T. Newell also gave an interesting talk on his visit to Johns Hopkins Hospital.

Dr. Willard Steele, the essayist of the evening, read an interesting paper on "Ocular Signs and Symptoms in General Medicine," which was freely discussed by Drs. Travis, Smith, McQuillan, Long, Cheney and Fancher.

Dr. E. B. Anderson reported a case of strangulated inguinal hernia and gangrene of the gut involved, which necessitated resection.

The 772nd regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order September 26, 1913, at 8 p.m., by President H. P. Larimore, with the following members and visitors present.

Visitors—Drs. Randall, Robert Tatum, Vickers, of Erlanger Hospital, and Wills.

Members—Wm. Bogart, Fancher, W. G. Bogart, Travis, Blackwell, Willard Steele, Meacham, Shoemaker, Renner, McQuillan, J. M. Broyles, F. T. Smith, Hillas, Cheney, Yarnell, Allen, J. B. Steele, Larimore, Wert, Y. L. and T. E. Abernathy, Barnett, Reisman, Berlin, Atlee, Wise, Horton, E. T. Newell, Dunbar Newell, Green, Hillard, and G. Victor Williams.

Minutes of September 12 were read and approved.

A letter of thanks was received from Mrs. R. N. Taylor.

Dr. Travis called the Societies' attention to the coming of the American Academy of Ophthalmology Laryngology and Otology, and it was moved, seconded and carried that Chair appoint two committees, one to be known as the Finance Committee, and the other the Automobile Committee. President Larimore made the following appointments:

Finance—Raymond Wallace, J. Webster and Frank Trester Smith.

Automobile—G. Victor Williams, B. S. Wert, George R. West and E. T. Newell.

Dr. E. T. Newell reported case of hernia in a 6-year-old girl. Case was discussed by Drs. Fancher, W. G. Bogart, Barnett, Woolford, Berlin, and F. T. Smith.

Interesting case reports were made by Drs. Travis, Cheney, Wert and Green, which resulted in an interesting discussion.

Dr. H. Berlin, the essayist of the evening, demonstrated serum diagnosis of pregnancy, which was intensely interesting, and which was discussed by Drs. Fancher, Horton and Shoemaker. Discussion closed by Dr. Berlin.

There being no further business the Society adjourned.

The 773rd regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order October 3, 1913 at 8 p.m., by the President, H. P. Larimore, with the following members present:

Visitors—Drs. Wills, Tatum and Alsbrook. Walker, Vickers and Dickey.

Members—Drs. T. E. and Y. L. Abernathy, Yarnell, E. B. and W. E. Anderson, West, Wallace, Barnett, Hogshead, Haskins, Stem, Green, Berlin, West, Smith, Cheney, Rathmell, Atlee, Fowler, Hillas, J. M. Broyles, J. B. Steele, Larimore, Clements, Sullivan, Renner, Wise, Willard, Steele, Travis, Woolford and McQuillan.

Minutes of the previous meeting were read and approved.

Invitation to visit the Tuberculosis Sanitarium was received and vote of thanks ex-

tended Miss Plewees, and Secretary was instructed to write Miss Plewees that it would be impossible at this time.

Dr. J. W. McQuillan read an abstract on anoci-anesthesia, the latest works of Geo. W. Crile, which was discussed by Drs. Wallace and Barnett.

Dr. Raymond Wallace reported Anel's operation for aneurysm of the femoral artery.

Dr. J. S. B. Woolford read an interesting paper on repairs of the female perineum. Discussion was opened by Dr. Stem and continued by Drs. West, E. B. Anderson, Haskins, Barnett, Clements, Rathmell, Cheney and Wise, and was closed by the essayist.

The meeting then adjourned.

G. VICTOR WILLIAMS, Secretary.

HENDERSON COUNTY.

The Henderson County Medical Society met Tuesday, October 14, in the Moose Hall, and held the annual election of officers. Dr. R. L. Wylie, of Scotts Hill, was elected President; Dr. J. M. Arnold, of Lexington, First Vice-President; Dr. W. I. Howell, Second Vice-President, and Dr. S. T. Parker, Secretary. Dr. W. B. Keeton was elected delegate to the State Medical Society, to be held in Memphis, and Dr. J. P. Graves, alternate. Visitors present were: Dr. A. P. Dancy, of Jackson; Dr. B. C. Doods, of Huntingdon; Dr. J. F. Williams, of Yuma, and Dr. Smith of Jack's Creek. The visitors were called on to make short talks, after which the Society adjourned to enjoy a banquet given at the Scott House. The Henderson County Medical Society is in a very flourishing condition, and the Councilor says we have the best Society in the Eighth District.

S. T. PARKER, Secretary.

DAVIDSON COUNTY.

September 2—There was no meeting of the Academy on account of a lack of a quorum.

September 9—The Academy met in regular session in the Tulane Assembly Room at 8:20 p. m., with the President, Dr. Olin West, in the chair. Those present were: Drs. Duncan Eve, Sr., H. Barr, Duncan Eve, Jr., R. A. Barr, Oughterson, Brush, H. King, Simons, Sharp, Floyd, Eggstein, Davis, J. Witherspoon, Hib-

bett, Tarpley, R. Caldwell, L. Caldwell, Billington, McCabe, Litterer, Overton, Shoulders, Pollard, Ward, Kennon, Cayce, C. F. Anderson, Edwards, Bromberg, Hutchinson and Hargis.

The minutes of the previous meeting were read and approved.

Dr. J. Owsley Manier was elected to membership, eighteen votes being cast, all in the affirmative.

Dr. J. Howard King read the essay of the evening, his subject being, "Epithelioma of the Face."

Dr. Eggstein, in opening the discussion, treated the subject from the standpoint of the pathologist. After referring briefly to the part heredity is supposed to play in the etiology of this affection, he described in detail the microscopic structure of the various forms of epithelioma affecting the face.

Dr. Billington asked the essayist to state, in closing, the value of the X-Ray and radium in the treatment of epithelioma.

Dr. Duncan Eve, Sr., speaking to the point of the causal relationship between irritation and epithelioma, said that it was Rodman who first brought out the point that epithelioma is rarely found in the negro, while that race smokes, perhaps, more continuously than the white. While admitting that it does occur, Dr. Eve asked how many had seen epithelioma of the face in the negro. As to treatment, Dr. Eve has used Marsden's paste and other escharotics, including actual cautery, doing so to expedite the treatment and avoiding a reputation of being too fond of the knife. In this he made an ignominious failure. He has used the X-Ray and sent these patients to others for X-Ray and radium applications, but found that the percentage of recurrences was too great. Dr. Eve has come to the conclusion that excision is the only proper method to prevent recurrences; this to be followed by the X-Ray, preferring the latter to radium. Dr. Eve took exception with the essayist that the sub-maxillary and sublingual glands should be removed in the deep forms whether involved or not.

Dr. Litterer agreed with Dr. Eve in the treatment, viz.: wide extirpation followed by the X-Ray. Dr. Litterer thinks the X-Ray

retards the growth, but doubts if the connective growth engendered will entirely stamp out the malignant process. He has never seen the X-Ray do any good in the basal cell variety. In the squamous type it does the most good. He believes that if the glands are enlarged they should be removed, presuming that metastasis have formed.

Dr. King in closing referred to the part heredity plays in malignancy, quoting experiments made by Wasserman and others on the transplantation of malignant tumors in mice. In regard to treatment, Dr. King referred to Dr. Howard Kelly's flattering results with radium; and as to X-Ray there is much difference of opinion. The latter is most applicable to the superficial type (rodent ulcer) not on the mucous membrane. In the latter it does harm. In post-operative work there is also a difference of opinion as to the value of X-Ray; some claim the rays close the lymph channels, thus preventing recurrences, while others claim that they act as an irritant predisposing to recurrences. Dr. King believes that the superficial variety of epithelioma will often yield to curetting and the application of escharotics. In reply to a question of Dr. Eve's in regard to recurrences when so treated, Dr. King replied that there would be recurrences, and added that all of the epithelioma cases should be told to report at least once a year to watch for recurrences.

Dr. R. A. Barr, apropos of the dearth of papers, brought up the matter of abstracting the current literature by the members to be read before the Academy. This was originally called to the attention of the Academy by Dr. McCabe some time since in a resolution calling for a committee to devise ways and means to best accomplish this. At the suggestion of the President, this matter was laid over to next meeting.

Case reports were then declared in order and Dr. R. A. Barr presented the following: "G. F. C. White. Male. Unmarried. Family history: Father living. Mother dead of measles. Five brothers living. Three sisters living. One sister dead, cause unknown. No family history of tuberculosis or cancer.

Personal history: Patient smokes and takes an occasional drink. Has had no genito-uri-

nary or venereal disease. Ordinary diseases of childhood. Mild pneumonia six years ago.

Present illness. During the first week of August, 1913, the patient got up one morning with a pain in the right lower abdomen. The next day he went to see a doctor and found that he had fever. No nausea or vomiting at this time. There has been more or less discomfort present ever since, and he has been confined to his bed about half of the time. About a week after the beginning of the trouble he noticed a lump in his side. This lump has gotten larger and he has had to keep his thigh flexed. He has had no chills or sweats except some chilly sensations a day or two before he was taken with the pain. On the morning of September 5 he was taken with severe pain in the region of the swelling in the right side. No vomiting. He thinks that during the entire time he has been sick that he had fever only for the first two or three days, and on the day of his last attack. He has had no nausea or vomiting at any time. He has had no medical attention, but has kept his bowels open and at times would use hot applications.

Physical examination. On admission, September 6, at 4 a. m., the patient had a temperature of 101.4 F., and a pulse of 120. The patient was rather thin and pale looking. Heart and lungs apparently sound. Lies on right side with thighs flexed. The right thigh could not be straightened beyond a right angle without causing considerable pain. The abdomen was flat and soft except in the right inguinal region where a mass almost as large as a clenched fist, oval in shape, was situated along the outer half of Poupart's ligament and the anterior portion of the crest of the ilium. The mass was of bony hardness and seemed to fade into the bone itself. Rectal examination showed the pelvis clear. Urine: Amber. 1.030 sp. g. Acid. No albumen. No sugar. No casts. No blood. A few pus cells. Blood: Hb. 80 per cent. W. B. C. 9,000. R. B. C. 5,000,000. Differential leucocyte count not made.

The tumor felt like a solid mass, but its rapid growth rather precluded the idea of actual tumor formation. The low leucocyte count was a little confusing, but in spite of

this it was decided to make an incision over the mass in expectation of finding some pus. As it was not expected to do more than to drain an abscess, the McBurney incision was used. The skin, fat and aponeurosis of the external oblique were enormously thickened, though normal or practically so in appearance. The internal oblique and transversalis were enormously thickened. When the peritoneum was reached it was found, in turn, to be very much thickened, and for fear of tearing into the bowel which might be adherent on the inner surface, it was decided to make another incision in a free area, so to speak. A median incision was made and the caecum found closely adherent in the fossa of the ilium. The tip of the appendix projected below this and with a roll of omentum was adherent along the reflection of peritoneum from the anterior wall on to the iliac fossa. The adhesions were very vascular and bled profusely on being broken up. After the appendix and caecum had been freed from their new attachments to the posterior wall, the peritoneum around the base of the appendix, which lay very high, was found sufficiently sound to allow for inversion of the stump. The appendix was removed, its attachment to the caecum being taken care of by the ordinary pursestring technic. After the appendix had been gotten out of the way, it was discovered that the entire tunefaction present before the operation was in the belly wall. There was no pus present at any part of the incision made through the swelling and, as already stated, the structures were normal in appearance except the peritoneum, which was very much thickened as were the deeper muscles. Both wounds were closed without drainage, as the stump of the appendix had been satisfactorily taken care of, and there was no necrotic tissue at any point. At 10 p. m. following the operation the patient's temperature was 101.4 F. During the next day it remained under a 100 F. and on the second day was normal. He has been entirely comfortable, has had no nausea and has required no morphine."

Dr. McCabe in discussing Dr. Barr's case said that he has seen two similar cases; one in a negro man of 25 years, with a history of

typhoid. An old perforation with abscess was suspected. Upon incising the mass the muscles were very much thickened and brittle, resembling frozen tissue. The other case was a negro boy giving a history of injury in the right inguinal region. An identical condition to his first case was found.

Dr. Simons presented a patient in which he had removed an ingrowing toe nail under venous anaesthesia (local), according to Kaerger. Technique: "Put on an Esmarch or Martin bandage. Dissect out a superficial vein from the operative field. Tie vein centrally and inject vein peripherally with 10-30 c.c. of 1 per cent novocain. Suture up wound in skin and by that time the anaesthesia is complete. Remove bandage and operate on part anaesthetized."

Dr. Duncan Eve, Jr., reported having operated upon a case which was diagnosed as typhoid perforation by the house staff of Vanderbilt Hospital as typhoid perforation. The patient's temperature was 106 F., pulse 200 when operated. No perforation was found, but the appendix was removed.

Dr. Jack Witherspoon detailed the pre-operative symptoms of this case, saying that the patient entered the hospital three days after he had taken to his bed. He had run a temperature of 101 to 103 for the five days previous to operation. On this day he complained of pain in the abdomen and his temperature dropped from 103 F. to 96 F. There was some distension, but little rigidity. An eighth of a grain of morphine was given. The blood count at 7:30 p. m. showed 5,500 leucocytes. The patient had a distinct chill, and at 10 p. m. leucocyte count showed 16,500. After operation temperature dropped to 97. The next day the patient was comfortable and the bowels moved. No blood was discovered in the stools. Since the operation the patient has run a typical typhoid course.

Dr. McCabe said that he doesn't pay much attention to a fall in temperature in typhoid unless there is an increase in the pulse rate. In regard to the leucocyte count, he said that he had two cases of typhoid to perforate in the City Hospital the same afternoon and both had a white count of 5,000. They both had, subsequently, peritonitis, but the count did not rise. They both died.

Dr. Barr asked Dr. McCabe the condition of these patients, and if they had any other symptoms. Dr. McCabe said yes, but not marked, but felt the conditions were too grave to operate when definitely diagnosed, he being misled by the leucocyte count.

Dr. Barr said that it was exceptional to catch the primary fall of temperature in typhoid perforation. He congratulated Dr. Eve on the outcome of his case, and said that he had made an exploration for suspected typhoid perforation, and the patient died. Dr. Barr thinks typhoid perforation most difficult to diagnose, but thinks that the diminution of liver dullness in a flat, rigid belly very valuable, but it is not often obtained.

Dr. Eggstein reported that he had examined the appendix removed by Dr. Eve during his exploration and that it contained a typical typhoid ulcer.

The Academy then adjourned.

September 16th.—The Academy was called to order by Dr. G. C. Savage at 8:15 p. m., the President and Vice President being absent. Those present were: Drs. Savage Sullivan, W. B. Anderson, Simons, O. Bryan, Black, Jones, Morgan, Litterer, Glenn, Overton, R. A. Barr, Sharp, Hargis, Glenn, Edwards, Goodwin, Pollard, Davis, Burch, Floyd, H. Barr, L. Caldwell, McCabe, R. Caldwell, Ward, Kenyon, Cayce, J. Witherspoon, L. Smith, Fuqua, Crawford, Aycock, Eggstein, Sanders, Brush, Owsley, Bromberg, Leonard, C. F. Anderson, Hill, Dixon, Toy, Harrington, Sayers, and visitors.

Dr. R. A. Barr moved, seconded by Dr. McCabe, that the reading of the minutes be dispensed with. Carried.

Dr. W. Frank Glenn read a paper on the "Treatment of Typhoid Fever." This paper was very liberally discussed by Drs. O. N. Bryan, McCabe, Harrington, Hargis, Toy, Sullivan, Dixon, Hill, L. Caldwell, Richards of Sparta, W. B. Anderson, Litterer, and closed by Dr. Glenn, many speaking two or more times.

Dr. Henry W. Morgan then addressed the Academy on the subject of mastication with especial reference to the amount of force expended in the performance of the act. The

special instruments devised to measure this force were exhibited.

Dr. W. M. McCabe made the following motion: That a committee of three be appointed for the purpose of formulating plan to abstract the recent literature for the Academy meetings. This was seconded by Dr. J. Witherspoon and carried. The Academy adjourned, the constitutional hour having arrived.

September 23rd.—The regular weekly session of the Academy was held in the Tulane Assembly Room at 8:05 p. m., with the President, Dr. Olin West, in the chair. Those present were: Savage, Bloomstein, Hargis, McCabe, Hibbett, R. Caldwell, L. Caldwell, Witt, Eggstein, Shoulders, Leonard, Larkin Smith, Aycock, D. Eve, Jr., Barr, Fuqua, Oughterson, J. P. Crawford, Ward, H. King, Pickens, Schell, Pollard, Floyd, Manier, Simons, Litterer, Cayce, Burch, Hutcheson, Overton and Kennon. The minutes of the previous meeting were read and approved. The President announced the committee provided for in a resolution introduced by Dr. McCabe at the previous meeting to be: McCabe, Barr, Kennon, Larkin Smith and Witt.

Dr. M. L. Connell was elected to membership in the Academy, fourteen votes being cast, all in the affirmative.

There was no essay schedule. Dr. McCabe reported having used salvarsan in the treatment of a case of amoebic dysentery. He had seen a favorable report of its use in this disease in the *Journal of the A. M. A.*, and decided to try it. He reported that the amoeba disappeared from the stools on the second day and that the patient was apparently cured.

Dr. Witt asked if emetin had been tried in this case. Dr. McCabe said that he didn't know that emetin had been tried. Dr. Witt stated that he would try emetin before he would resort to salvarsan. However, he understood that Dr. McCabe used salvarsan to gain first-hand information as to its value in this disease.

Dr. Floyd reported further on one case of a series of amoebic dysentery patients he brought to the attention of the Academy some time since treated with emetin. He said that

this patient's stools had decreased from 5 to 6 daily to 1 to 2; that the patient had gained 12 pounds, and has remained well.

Dr. Savage spoke on the etiology of poliomyelitis. He said that he had been ante-dated in the announcement of the discovery of the alleged cause of poliomyelitis by about 21 days. He, therefore, surrendered his claim of priority to Dr. Sanders of St. Louis. Dr. Savage read letters from the parent of the child he saw in Dresden in regard to the diseases prevalent in the fowls of that community, as well as from Dr. Kittrell of Texarkana and Dr. Wisdom of DeQueen, Ark., the latter agreeing with Dr. Savage in regard to the casual relationship between "limber-neck" in chickens and poliomyelitis in man.

Dr. Litterer stated that he had not experimented along the line of Dr. Sanders of St. Louis, but had attempted to produce the disease from the excreta of the chickens by inoculating guinea pigs and chickens. He has had no results so far. He is not certain that the fowls he has experimented with has the type of "limber-neck" he is familiar with. He has not examined the spinal cords of these chickens to see what areas are involved. Dr. Litterer said that it is generally believed that "limber-neck" is due to a ptomaine from maggots, and therefore not transmissible.

Dr. Larkin Smith reported the following case: "Woman of 49, mother of four children, was seen about September 9th. She always led a very active life. In early life she had typhoid and later pneumonia; then measles complicated by a second pneumonia. Eight years ago she suffered a severe infection following the birth of her last child; was always well, vigorous and very hard working woman up until about August 7, when, upon starting to leave home on a trip to town, was suddenly seized with an attack of palpitation, dyspnoea, dizziness, and, as she said, "was very nervous." She was put to bed, and when seen by her physician was in this condition, with a very irregular and rapid pulse. Following this she had severe, sharp pain in the left shoulder radiating down the left arm, which required analgesics and even morphia. Under the administration of digitalis the pain increased and diminished un-

der aconitine. On August 9th, she was seen by a consultant, who took her blood pressure from her left brachial artery.

"Inspection showed pulsation in the inter-clavicular notch synchronous with systole, but was not palpable. Nothing else discovered in the chest by palpation or percussion. A distinct systolic murmur was heard all over the chest with p. m. i. at apex and distinctly transmitted well out and around the left side. Neither the left radial nor the left brachial pulse was palpable. The left hand and arm were cooler than the right, but scarcely any perceptible change in the nutrition. Remember that on August 9th the blood pressure was taken from the left brachial. On September 9th the blood pressure was: systolic 140, diastolic 95. Sphygmographic tracing taken from the right radial artery showed a flattened top to the wave, indicating sustained pressure and full vessels. Of course, she had mitral incompetency, in addition to which, from the symptoms and physical signs and reactions to digitalis and aconitine, I diagnosed aneurysm of the arch of the aorta distal to the innominate artery."

Dr. Witt saw this patient on August 9th. He found a normal-size heart with a loud mitral systolic murmur heard in the axillary area and the base of the heart, where it lost some of its intensity, becoming louder in the great vessels of the neck. The blood pressure was 135 in the left arm. There was no marked evidence of vascular disease. The lack of congestion in the lungs, liver, legs and the acute onset left him at a loss to account for her disturbance. He was more interested in the systolic murmur over the great vessels than that over the mitral area. About one week ago Dr. Witt was in the community and saw the case again. The findings then were the same as Dr. Smith reported. There was little or no pulse in the left radial axillary and little in the sub-clavian. Dr. Witt is not sure that the patient has an aneurysm, though he believes this the most reasonable diagnosis. Thrombosis is possible, though this is a very large artery for this to occur.

Dr. Oughterson said that it is difficult to say whether this is an aneurysm or not. In regard to the obliteration of the left radial pulse, he said that the sac may be so large

that the ventricle empties itself into the sac so that the blood stream becomes continuous instead of flowing in a pulse wave.

Dr. Smith, referring to Dr. Oughterson's theory of the suppression of the pulse, said the sphygmographic tracing showed a sustention of the pulse, thus bearing out his idea.

Dr. Bloomstein reported a case of probable tetanus in a baby one week old. However, there was no rigidity about the neck or jaw. During the course of the disease the temperature reached 108 F. rectal. The child died on the fourth day, following this high elevation of temperature.

Dr. Witt reported a typical case of pernicious anemia in a man of 51, with subsequent cord changes occasionally seen in that disease. The Wasserman reaction was positive and in view of the position taken by Byron Bramwell of Edinburg in regard to the treatment of pernicious anemia by salvarsan, Dr. Witt has recommended it in this case, though he hasn't administered it as yet.

The Academy then adjourned, 9:30 p. m.

September 30th.—The regular meeting of the Academy was called to order at 8:15 p. m. by the President, Dr. Olin West. The Secretary being absent, Dr. L. J. Caldwell was asked to serve in that capacity. Among those present were: R. A. Barr, Bromberg, Oughterson, Bloomstein, McCabe, Duncan Eve, Sr., Haggard, R. Caldwell, Hibbett, Harris, Larkin Smith, Goodwin, Mitchell, Cayce, Jones, Simons, Sanders, Sharp, Floyd, Reynolds, Litterer, D. Eve, Jr., Pollard, Crawford, Owsley, and others.

The President read a communication from Dr. A. B. DeLoach, Secretary of the State Board of Medical Examiners, calling attention to an instance of alleged illegal practice in Davidson County, and suggesting that the Academy appoint a committee to investigate this case, as well as to take steps to eliminate quacks and charlatans generally. It was moved and seconded that a committee be appointed to investigate the alleged illegal work of Dr. G. W. Lang of Joelton, Tenn., and report to Dr. DeLoach. This motion was amended so as to have this committee refer the acts of all questionable physicians to the Grand Jury. Carried, and the chair appointed Dr.

Duncan Eve, Sr., Chairman, Robert Caldwell and S. M. Bloomstein as the committee.

Dr. McCabe, as Chairman of a committee to devise ways and means of abstracting the current literature for the Academy, asked for further time in which to report. This was granted.

Dr. Robert Caldwell reported the following case: "R. W., aet. 17. Family, previous and personal histories negative. Seventeen days prior to entrance to the hospital he had had a continuous fever which was supposed to be typhoid. The day prior to his entrance into the hospital a mass was noticed in his epigastric region which was not diagnosed by the attending physician, except to say that surgery was indicated. When first seen at the hospital he was unable to lay down except in a semi-reclining position, turning to the left side. Pulse, 150 or more; respiration, 35 to 40; temperature normal. Cyanotic, face pallid. There was a mass in the epigastric region extending down almost to the umbilicus, which I believed to be liver, as the lower border could be distinctly made out, and dullness was continuous to as high as the third rib, covering the entire front of the chest. Breath sounds were heard behind. Leucocyte count, 12,400. Abscess of the liver was diagnosed by myself and consultant. Operation was advised and accepted. On opening the abdomen through a right rectus incision I could readily see that the liver was not involved. The diaphragm was seen bulging down instead of up, being more marked on the left side. I then aspirated the left pleural cavity and obtained only a small amount of serum. Failing to relieve the distressing condition of the patient by this, I determined to aspirate the bulging diaphragm through my abdominal incision, which I did and drew off at least a quart of serum. The abdominal incision was closed and the patient put to bed. After two weeks he left the hospital in a very much better condition. The heart was still rather rapid, 120, regular, and very much improved in volume. The patient was able to sit or lay with comfort."

Drs. R. A. Barr and Oughterson discussed Dr. Caldwell's case, the former disagreeing with the diagnosis of pericarditis.

Dr. Haggard reported a case and present specimen of tubercular kidney. This was discussed by Dr. Bromberg. Dr. Haggard also reported a successful resection of 6 feet of intestine due to intestinal obstruction. The patient is now well.

Dr. Simons reported the following case: "Man, aged 60. History not carefully gone into. Patient had been progressively going down hill during the last year. Steady increasing pallor of the skin. Skin in places has gradually developed bronzing and white spots. Great asthenia. No diarrhoea or emaciation. At times great mental torpidity, but not more than a couple of hours' duration. During the last week has had fever of irregular type, occasionally 103 F. Physical examination: Grey-haired man. Condition very poor. Mentality dull. Answers questions slowly, but is likely to stop in the middle of a sentence. Emaciation not marked. Marked pallor of the skin and mucous membranes. Tongue dry and ridged down the center. Skin in places bronzed, but the dorsum of the hands and fingers showed splotches of leucoderma. Heart: distinct systolic murmur at the apex not transmitted. Pulse: soft, regular, low tension, rate 100. Blood pressure, systolic, 100-110. Liver: percusses from the fourth rib to free border. Distinctly felt about a hand's-breadth below ribs. Is firm and edge sharp. Spleen not felt. Legs said to have been edematous, but this has receded. Prostate not enlarged. Urine: some pus cells. Blood: Red cells, 750,000. Hg. 15 per cent. Color index 1.6. Spreads: megaloblasts-macrocytes, etc. Diagnosis: megaloblastic, macrocytic blood with high color index. Progressive pernicious anemia. Cause of temperature not found on physical examination. Flood culture: about a dozen colonies of a gram positive, saprophytic bacillus. Evidently a prelethal invasion of the blood stream with a saprophyte. This is not an uncommon occurrence in essential blood diseases."

Dr. Simons' case was discussed by Drs. Jones and Litterer.

Dr. Bloomstein reported a case of congenital syphilis in a child two months old with marked nose symptoms, and asked if it was proper to treat this little patient with neo-

salvarsan. Drs. Oughterson and Harris discussed this case, the latter referring Dr. Bloomstein to literature bearing on the subject.

Dr. Cayce reported two cases of cancer of the larynx and another of a malignant growth removed from the sclero-corneal junction of the eyeball.

These cases were discussed by Drs. Bromberg, Barr and Crawford.

Dr. Duncan Eve, Jr., reported the following case: "J. P. G., Allensville, Ky. Aet. 14. Family History: F. and M. living and well. Two sisters and one brother living and well. Had chicken-pox and whooping cough. No typhoid. No t. b. in the family. For the last four years the patient has noticed that the left leg had a tendency to get sore and stiff after much exercise. It seems that this sensitiveness gradually increased, but not bothering him much until February, one year ago, when the patient was struck on the limb with a baseball. He states that the limb has been sensitive over the involved area since he first noticed it, and when struck by the ball it made him deathly sick. Patient states that since being struck by the ball, the leg has grown gradually worse. Exercise aggravates the sensitiveness very much, and the night following the excessive exercise there is a slow, dull ache in the limb. The pain has never been sharp or throbbing. He has one-half inch shortening of the limb. Operation August 30th, 1913. At the lower third of the femur on the anterior surface the periotomeum was very thick for an area of one and one-half inches long and about three-fourths of an inch wide. This was removed down to the canal; also, the whole area was curetted and carbolic acid placed in same with alcohol afterwards. The specimen was sent to Dr. Litterer, who reports it to be a giant celled sarcoma, plus a large round celled sarcoma. Some areas showed a mixed cell type."

Dr. Litterer and Dr. Robert Caldwell discussed Dr. Eve's case.

Dr. Bromberg reported finding a round worm in the small intestine of a patient on whom he was doing an appendectomy for acute appendicitis.

Dr. West facetiously remarked that from

the above he hoped the surgeons would eventually learn that such things as worms exist. The Academy then adjourned.

October 7, President Olin West called the regular weekly meeting to order at 8:10 p.m., the following being present: Morrissey, Sullivan, Hill J. A. Witherspoon, Brush, McGannon, Hargis, H. King, Overton, Savage, Crawford, Litterer, Crockett, D. Eve, Sr., Simons, Campbell, Owsley, Toy, Goodwin, Thach, Cayce, Sumpter, Eggstein, R. Caldwell, Black, Cowden, Shoulders, Schell, Kennon, Edwards, Sayers, Pollard, Ward, Oliver, Hibbett, Harris, Witt, Oughterson, Doak, R. A. Barr, McCabe, Sharber, Burch, Keller, C. F. Anderson, Dixon, Tigert, L. Caldwell, Tarpley, Nichol, Aycock, O. Bryan, Jones, Hatcher, Weaver, Sullivan, J. Witherspoon, and others.

Dr. R. A. Barr moved that the reading of the minutes be dispensed with. Carried.

Dr. McCabe submitted the following report of Committee on Abstracting Literature: "Your committee appointed to formulate plans for abstracting the literature wishes to recommend the following: First, that the constitutional hour of adjournment be abolished. Second, that the reading of essays, and the reporting and discussing of cases begin at 8 p.m. and continue until completed, but not later than 10 p.m. Third, that the reading and discussing of abstracts commence at 10 p.m. or earlier and continue until finished. Fourth, that the President be empowered to appoint men to abstract the current literature each week; said abstracts to be brief and in writing. The above men to be appointed for three months. Fifth, that the above men constitute a committee to select members for the purpose of abstracting the literature on special subjects, and that the last Tuesday evening in each month be designated for that purpose. Sixth, that the following division of subjects be accepted and that one man be appointed to abstract each subject: (a) Obstetrics; (b) Abdominal Surgery and Gynecology; (c) General Surgery and Anatomy; (d) General Medicine; (e) Pediatrics; (f) Orthopedics; (g) Genito-Urinary and Venereal Diseases; (h) Dermatology and Syphilis; (i) Bacteriology, Pathology and Experimental

Medicine; (j) Eye, Ear, Nose, and Throat; (k) Physiology; (l) Therapeutics and Preventive Medicine; (m) Nervous Diseases. Your committee further wishes to recommend that the membership of the Academy be encouraged to discuss the abstracts freely and that the discussion be limited to five minutes.

"Respectfully submitted,

Signed: "W. H. WITT,

"R. A. BARR,

"LARKIN SMITH,

"W. G. KENNON,

"W. M. McCABE."

Dr. Keller moved, seconded by Dr. Barr, that the report be adopted. Carried. Dr. Barr moved, seconded by Dr. McCabe, that the By-Laws be so amended that the hour of adjournment provided therein be abolished. This motion was allowed to lie over to the next regular meeting, so that notice of the contemplated change could be given to each member.

The President brought to the attention of the Academy the fact that he had been informed that there are members of the Academy who had been guilty of irregular and unethical practice. The President stated that in view of the statements and apparent proof in the hands of some of the members he felt this to be his duty, and with this statement will leave the matter in the Academy's hands.

Dr. Duncan Eve, Sr., was called upon to report the progress of the committee of which he is Chairman to investigate the alleged malpractice case at Joelton, Tenn. Dr. Eve stated that his committee held a meeting and one member was commissioned to see Dr. Handly, who was now attending the patient treated by Dr. Langs. The committee proposed to go before the Grand Jury with documentary evidence after consulting the Attorney-General. The patient involved promised to meet the committee on the 8th inst., at which time the committee would go with the man and present the matter to the Grand Jury.

Dr. Sharber, the essayist of the evening, read a paper on "Uterine Hemorrhage Due to Local Causes."

Dr. Tigert opened the discussion deprecating the use of temporary medicinal remedies

without first making a systematic examination. To find the cause of the menorrhagia is the question. In many cases, though this is not easily determined. Dr. Tigert took issue with the essayist in that there were gratifying results following operation for malignant disease. In Dr. Tigert's experience this was not so. Many may think they are getting such results, but they are misled.

Dr. Burch remarked that it is the duty of the general practitioner to adopt an exhaustive examination in a case of uterine hemorrhage, as well as a complete history. The causes of uterine hemorrhage are usually within the pelvis, whereas in amenorrhea they are usually without. The majority of the cases of the former condition—say 75 per cent—are due to one or two of the five following conditions: (1) Cancer; (2) abortion; (3) fibroid; (4) endometritis; (5) extra-uterine. Cancer and extra-uterine pregnancy are two conditions often overlooked. Dr. Burch thinks that drugs are of little value, but of these pituitin is the most valuable, especially if used in conjunction with ergot and strychnine, according to Edgar.

Dr. Sharber, in closing, stated that he brought this subject up because it is a condition frequently met and urged that a thorough examination be made in each case.

Dr. Barr reported a case of adenocarcinoma in the breast of a girl of ten years.

Dr. Gallagher asked what was his procedure in handling this case.

Dr. Barr replied that he only removed the tumor and gland down to the muscle (not doing a radical operation) and sent the specimen to the laboratory for examination.

Dr. McGannon reported a case of missed abortion in one horn of a bicornate uterus.

Dr. Crockett reported a boy of seven, whose complaint was headache. His temperature was found to be 100 F. by a local physician, and was given a laxative and quinine. Two days later the doctor found rigidity of the neck. No delirium, but some stiffness of the legs. Temperature 99 F. Meningitis was suspected and spinal puncture was done. The fluid was perfectly clear and no serum was injected. In two days the patient had a high fever. No pain or delirium were present.

Quinine again was administered. Blood examination showed no leucocytosis and no malarial parasites, but much pigment. Urine normal. The patient became unconscious and died in two hours, on the tenth day. A diagnosis was asked for.

Dr. Kemm asked if there was a bacteriological or cytological examination made of the spinal fluid. He said that the microscopic appearance of the spinal fluid was most unreliable, as meningitis is often present with a clear spinal fluid.

Dr. McCabe reported a case of intra-uterine abscess whose history was similar to the case reported by Dr. McGinnon.

Dr. Toy reported a boy of four years, seen four days previously with a history of a few days' illness prior to the time seen. There was some fever present, and the bowels had moved twice from a dose of castor oil; he had also vomited. Later on the same day the temperature was 99.5 F. No rigidity of the neck, and the abdomen, but the child looked sick. Next morning at 4 a.m., found child in severe pain, with fast pulse. Gave high enema of 3 1-2 quarts of soap suds, but it returned clear with no gas. At 2 p.m. the child died. He asked for a diagnosis.

Dr. Savage asked Dr. J. A. Witherspoon to give the Academy his impressions of the International Congress of Medicine, which he attended in London. Dr. Witherspoon gave a very graphic and entertaining description of the Congress, together with magnificent entertainment accorded by the British Government. The Academy adjourned.

J. F. GALLAGHER, Secretary.

ARMOUR GETS GOLD MEDAL.

The International Congress of Medicine held at the University of London, gave the gold medal, the only award in this class, for digestive ferments to Armour & Co., Chicago. This is another high acknowledgment of the pre-eminent quality of Armour's Pepsin and Pancreatin.

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pendent analysis to test the finished preparations make a combination that furnishes products which appeal to those demanding the best.

Book Reviews

BOOKS RECEIVED.

The Practical Medicine Series. Volume IV. Gynecology, edited by Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, and Herbert M. Stowe, M.D.; Associate in Gynecology, Northwestern University Medical School; attending obstetrician to Cook County Hospital. Series 1913. The Year Book Publishers.

INTERNATIONAL CLINICS. A quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the Medical Profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the collaboration of John A. Witherspoon, M.D., Nashville, Tenn.; Sir William Osler, M.D., Oxford; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thos. H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; Jas. J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Richard Kretz, M. D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. 3. Twenty-third series, 1913. Price, \$2.00. J. B. Lippincott Co., Philadelphia and London.

BOOKS REVIEWED.

PHARMACOLOGY AND THERAPEUTICS, for Students and Practitioners of Medicine. By Horatio C. Wood, Jr., M. D., Professor of Pharmacology and Therapeutics in the Medico-Chirurgical College; Physician to the Medico-Chirurgical Hospital; Second Vice Chairman of the Committee of Revision of the U. S. Pharmacopoeia. Price, \$4. J. B. Lippincott Co., Philadelphia.

To paraphrase a saying of one of our greatest Presidents, Jefferson, "those patients are treated best who are treated least." And it is a source of great regret to many physicians that they are forced to give their patients medicines at times—thus carrying out the practice of the tradespeople in giving the man what he wants.

It is a well known fact that even the latest revision of the Pharmacopeia contains many drugs that are worthless, yet they are recommended and prescribed. The author of this admirable book is Second Vice Chairman of the Committee of Revision of the U. S. Pharmacopeia, and, needless to say, is an authority on the subject.

Notwithstanding our skepticism in regard to drugs, every physician uses them, and whatever results may be expected from their use, it at least behooves us to know what is claimed for them. For example, it is popularly believed that strychnine is a heart stimulant. Let us see what Dr. Wood says on this subject. On page 202, we find: "Our knowledge on the effect of strychnine on the heart is not absolute, but it is improbable that it exercises any marked stimulant effect upon this organ." We believe that this is in consonance with the best teaching on the subject and quote it simply to emphasize the up-to-dateness of the book. We heartily recommend this volume as one of the best on the subjects of Pharmacology and Therapeutics. J. F. G.

TREATMENT OF INTERNAL DISEASES.
For Physicians and Students, by Prof. Norbert Ortner of the University of Vienna. Edited, with additions, by Nathaniel Bowditch Potter, M. D., assistant professor of clinical medicine at Columbia University (College of Physicians and Surgeons), New York; visiting physician to the New York City Hospital, and to the French Hospital. Translated by Frederic H. Bartlett, M.D., Instruc-

tor of Children's Diseases at Columbia University (College of Physicians and Surgeons), and attending physician to the Babies' Hospital. Second edition in English, revised and reset from the fifth German edition. Price, \$5.00. J. B. Lippincott Company, Philadelphia and London.

This excellent work has the fascination to claim one's whole time and attention, and, if criticism could be offered, it is that one is likely to neglect his patients or other reading in his intense interest. One virtually "hates" to lay it aside.

The author and editor have combined their talents into a work of more than ordinary value to the practitioner, "who is initiated into as much of the pathological physiology of the diseases discussed as bears upon their rational treatment."

In complying with the requirements of the Council on Pharmacy and Chemistry of the American Medical Association, the editor has omitted those drugs recommended by the author which have not been sanctioned by this body. A physician's standing and worth in his community is not to be measured exclusively by his ability to correctly diagnose disease, but he should show especial familiarity with recognized and accepted methods of treatment, and a careful perusal of this splendid work on treatment of the internal diseases will bear profitable results. We do not deem it necessary to criticize the few typographical errors or faults of the proofreader (as on page 113), but unhesitatingly commend the work to our readers.

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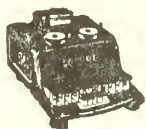
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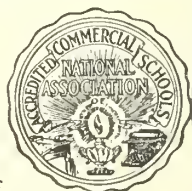
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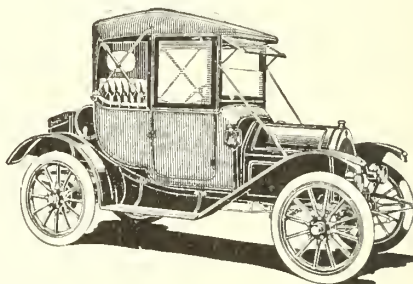
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INGUINAL ADENITIS; TREATMENT.*

Edward T. Newell, M.D.,
Chattanooga.

The subject of this paper was suggested to me in a two-fold manner: So many cases presenting themselves for treatment and so little literature about it. Then, too, there is such a wide variance of opinion that you hear in visiting the different clinics as to the proper mode of treatment of Inguinal Adenitis. With regard to the discussion of the subject, Keen's Surgery devotes less than a page to Lymphadenitis, not taking up Inguinal Adenitis per se. Von Bergman's Surgery dismisses the subject (aetiology diagnosis, symptoms, treatment, etc.) in less than half a page. Lexer-Bevean's Surgery is equally as brief. Johnston's Surgical Diagnoses, while discussing the subject in more detail, is far from being as exhaustive as you would expect it. Bickam's Surgery, Green & Brooks, and many others do little more than refer to Inguinal Adenitis and its treatment.

Guitierias; Urology, gives the most comprehensive discussion of Inguinal Adenitis that I have so far found, but his ideas with regard to the proper treatment, etc., are widely divergent from those found in Keen, and many other recent works.

Inguinal Adenitis is an inflammation of one or more glands in the groin. Bubo is usually considered to be an inflammation of one gland with considerable tumefaction, redness, pain,

etc. It is occasionally applied to a mass of glands matted together that have broken down into an abscess.

We find in Inguinal Adenitis all grades; the solitary fluctuating bubo, masses of glands easy of enucleation, simple enlargement of all of the glands (distinct), enlargements with peri-adenitis, and cellulitis of the whole inguinal region, to the three inches above, and the same distance below Poupart's ligament; this latter condition feeling as hard and as unyielding as a board.

The inguinal glands number from 15 to 20, and are classified in most anatomies in four groups; but to the surgeon the classification into three groups seems more practical, as follows: superficial, under the skin and above the fascia-lata. These are further divided into the horizontal group along the Poupart's ligament, and vertical, the latter around the saphenous opening. These constitute about three-fourths of all the glands and are the ones usually involved. The remaining one-fourth are above the fascia, alongside the femoral vein in the crural canal. The highest one of these, the gland of the Rosenmuller, is under Poupart's ligament and up against the peritoneum connecting with the iliac glands in the pelvis. In severe, chronic cases this gland is frequently involved. And it requires a great deal of care to remove it without injuring the vein and causing considerable hemorrhage.

The horizontal group drain, the mons veneris, the external genitals, perineum, lower part of the abdomen, lumbar region and buttocks. The vertical group drain the superficial surface of the lower extremity, while the

*Read before Tennessee State Medical Association, April 1913.

deep-set drain the deeper parts of the lower extremity. The superficial and deep sets communicate with each other, which is well demonstrated when the superficial sets are extensively involved, the deep set being involved later on.

When we come to the aetiology of inguinal adenitis we are confronted with the most perplexing and at the same time interesting points about the subject. Syphilis, chancroids and gonorrhoea have been known as causes of bubo and adenitis for a generation. I might add tuberculous inguinal adenitis, secondary furunculosis, malignancy and late involvements in Hodgkin's disease, lymphatic leukaemia, etc., are not uncommon. Still there are a large percentage of cases of unknown origin that present themselves for treatment.

These Dr. Guiteras calls Bubo D'emblee. "Infection," he says, "has taken place from some point of suppuration unknown or forgotten. Many of these cases are called tuberculous, but in my opinion unjustly so, for you cannot get the bacilli in over five per cent of them. Neither will you get a positive Von Pierquet in but a small number of cases." In my humble opinion, the infection has taken place through the blood stream; however, you can seldom find in the regions non-tributary to the glands a focus to pollute the blood stream. Then, too, why should there be such a predilection by this distant focus for the inguinal regions? In a great majority of the cases the patient will usually give a history of slight injury by which he accounts for the trouble. Usually in these cases it is a strain, a wrench of the leg or a fall, all of which the patient would not have remembered save for the adenitis that developed some days or weeks later.

In looking for the cause of these cases you are reminded of what emphasis Dr. J. B. Murphy puts on the infections following bone surgery, from an infected tooth, alveola process, old chronic prostate, etc. In my series of cases of unknown origin, I could not even find such indefinite causes as the above to account for them.

The question of treatment resolves itself into Medical, Conservative and Radical; however, most cases when seen by the surgeon

have passed the so-called Medical or Abortive stage and the Conservative or Radical treatment are the ones to choose between. If you should get a border line case, between abortive and operative, the abortive treatment would be predilective, for if it should not succeed it would hasten the recovery following the operative procedure. In the abortive cases many remedies have been advised—the application of heat, injection of 10 per cent iodiform emulsion, glycerin or olive oil into the gland or abscessed cavity, after first withdrawing the fluid. The small opening made by aspiration and injection is sealed up, and in two or three days, if need be, the abscess is again aspirated and filled and sealed. This is repeated until the cure is effected or the operative procedure is elected. Instead of the iodiform emulsion, some use benzoated oxide of mercury, silver nitrate, 3 per cent carbolic acid, equal parts of glycerin and carbolic acid, balsom Peru, a mixture of Iodine 1 part, Potassium Iodide 4 parts, and water to make a 100; 5 per cent Chloride of Zinc, etc. In all of my cases iodiform emulsion has served me best. Failing in the abortive treatment, you are to choose between the conservative treatment; simply opening up the abscess, or sinus, curetting with finger or curet, packing with iodoform gauze, and draining; or, choosing the radical method, removing all the affected glands and those nearby that may become affected.

With regard to which is the best method of treatment, Keen has the following to say: "The best treatment is complete removal, which promptly eliminates all offending nodes, ends the peril of general infection from them, and leaves a scar which is not unsightly, etc. One should not be deterred from the entire removal of a collection of nodes by fear of interfering with the flow of the lymph, a difficulty not rarely encountered."

Guiteras, on the other hand, says: "The operative treatment of Bubo consists of simply opening and draining, or removing it. Incision and drainage is by far the safest method." Further, he says under enucleation of glands: "Many operators say that this is the best surgical procedure, 'clean them right out and there will be no more trouble,' but

sometimes the patient loses his life or limb." He says he began investigating the accidents that could follow these enucleations and found that fatal hemorrhage, hemorrhage requiring the ligation of both iliac vessels, gangrene of the extremities, septic plebitis, pyemia, and other complications could take place. In one case that he operated on for inguinal adenitis the patient developed oedema of the external genitals that lasted five months. Later he saw a patient with oedema of the scrotum that reached nearly down to the knees. Both of these conditions followed operations for simple adenitis of the groin. He remarked that his house-surgeon, contrary to orders, dissected out inguinal glands in a particular case and that the patient died of septic pneumonia. Since this occurrence he does not enucleate any more glands; simply incise, wipes out the gland with a sponge, or curettes away the debris, packs and drains.

These are simply the opinions of two prominent surgeons, pro and con. I could cite you many more opinions of like character. At the large clinics that I have had the pleasure of visiting the last year, I find most men concurring in the opinion of Dr. Guiteris.

Will report six cases of inguinal adenitis that have been operated on recently and that are of particular interest from an etiological standpoint. In all of these cases, with the possible exception of one, I was unable to find a positive cause.

Case 1.

Male; age 22; farmer.

Diagnosis: Inguinal adenitis, both sides.

Family history: Good.

Personal history: Thought he hurt himself while ploughing three weeks before he presented himself for treatment.

Previous disease: Never sick that he could remember, except had catarrh of the post-nasal space, and colds. Had never had syphilis, gonorrhoea or chaneroids.

Subjective symptoms: Pain in both groins. Hurt him to move legs, and could not do any work.

Objective symptoms: Two large masses in each inguinal region, tender and red. They resisted tight bandaging and local treatment, with Potassium Iodide internally.

Operation: Complete enucleation of all superficial glands, the deep ones not affected. The wound healed and patient entirely well in a month.

Pathological examination showed no tubercle bacilli. It has been over a year since the operation, and patient is still well. Has no other adenitis. The cause of this case is unknown to the writer.

Case 2.

G. A. B., male; age 18; railway clerk.

Diagnosis: Left inguinal adenitis.

Family history: Good.

Personal history: Nothing of interest.

Previous history: Usual diseases of childhood. Had gonorrhoea a year ago lasting a few weeks. No discharge for a year previous to operation. Prostate and urine normal. Never had syphilis or chaneroids; nor any lesion in the region tributary to the left groin.

Subjective symptoms: Complaints of pain on walking, but not enough to go to bed or quit work.

Objective symptoms: Large mass, left inguinal region, with the usual inflammatory signs.

Operation: All superficial glands inucleated; deep ones not involved. Patient out of the sanitarium in two weeks. Wound completely healed in ten days more. Pathological examination showed no tubercle bacilli. Cause of this case unknown.

Case 3.

L. S., male; age 35; farmer, married.

Family and personal history showed nothing of importance.

Previous diseases: Those of childhood and typhoid fever several years ago. No history of venereal diseases at any time.

Subjective symptoms: The usual of inguinal adenitis.

Objective symptoms: Large mass in right groin. Pus cavity in center about ready to break through the skin.

Operation: Complete inucleation of superficial and deep glands. Wound closed in the usual manner with iodoform drain coming out at the most dependent part. This was removed in two or three days, wound healed

and patient back at work in three weeks. Von Pirquet was negative in this case.

Case 4.

W. J., male; age 22; soldier, cavalry.

Diagnosis: Left inguinal adenitis.

Personal history: While riding got a slight scratch on the outer side of the leg just above the external malleolus. This occurred a month before the adenitis. There was no lymphangitis present. The scratch was about well when he presented himself.

Previous diseases: Had never had syphilis, gonorrhoea or chaneroids.

Subjective symptoms: Terrible pain in groin; could hardly walk. Temperature 104, pulse 120.

Operation: Complete enucleation of superficial and deep gland. Temperature went down and off in 36 hours. Patient was out and well in three weeks.

No microscopical examination was made in this case, as the scar on leg a month before the adenitis probably accounted for the condition.

Case 5.

A. C. C., male; age 41; married; coal merchant.

Family history: Parents and grandparents lived to extreme old age.

Previous diseases: Has not been sick in 25 years. Never had syphilis, gonorrhoea or chaneroids.

Subjective symptoms: Thinks trouble came from firing his furnace. After the first sign of swelling he had three treatments by an osteopath, all of which produced great pain and made it worse.

Objective symptoms: Superficial and deep glands all affected. One solid mass the size of a fist.

Operation: Complete removal of all glands. The glands in the crural canal were very difficult of removal. Wound did not completely heal for six weeks; in the meantime the glands of the opposite side became inflamed, but were not very tender, and were not accompanied by fever as was the case with the left side. The right side was treated by aspiration and refilling the cavity with iodoform emulsion. This was repeated two or three times, and resulted in a cure.

Remarks: On the third day after his first operation the patient developed an abscess at the root of the left lower bicuspid that had to be opened. This was the only possible point of infection in this case. However, it developed after the groin became infected. The gland showed no tubercle bacilli.

Case 6.

B. H., male; age 28; soldier, U. S. cavalry.

Diagnosis: Double inguinal adenitis.

Family history: Good.

Previous diseases: Had gonorrhoea two years ago, but had been well for more than a year and a half. Prostate and urine normal. No chaneroids. Three years ago had syphilis. Took Potassium Iodide and mercury for two years, also mercury injections. Had taken three doses of Salvarsan in the last eighteen months, one only six months before he came to me. Had five Wasserman's made at the Walter Reed Hospital. The last three were negative. The last one was two months ago.

Subjective symptoms: Pain in both groins, with slight fever.

Objective symptoms: Left groin one solid mass, two inches above and two inches below Poupart's ligaments, with three incisions in it that were now sinuses. The right groin contained a small solitary gland with sinus leading down to it.

Operation: The left groin presented the worst condition that I have ever seen. As there were adenitis, pari-adenitis, cellulitis and involvement of the right rectus muscle and fascia. Incision was made through the center of the board-like mass, all glands that could be were enucleated, and others that showed that they contained pus were cut out with scissors. An opening was made down into the deep gland along side of the vein and two counter openings, one underneath the skin up to the right rectus and another down the leg below the saphenous opening. The rest of the wound was curetted, pure carbolic acid applied, and packed with iodoform gauze. Patient did well for ten days, then the pelvic gland became involved and the temperature went to 104 for a couple of days. Kept hot water bag over the new area of involvement for two days constantly and at a

second operation with sharp-pointed forceps succeeded in getting into two large pockets of pus, one in the left rectus near the middle line two inches above Poupart's ligament, and the other along the side of the external iliac vein. These were drained and the cavities injected with iodoform emulsion. The patient made a slow recovery five weeks after the first operation. No tubercle bacilli in glands. Unless this case was a mixed infection following syphilis, which three negative Wassermans showed did not exist, I cannot account for it.

In conclusion, I wish to state that the above cases demonstrate how often we do not find the etiology of inguinal adenitis. How often we do find this character of patients, and how serious some of these cases are. They also show that the treatment which is applicable to one case is not applicable to all. Had I tried to enucleate all the glands in case No. 6 I would have found an impossible task, one that would probably either have terminated by tearing a hole in the vein, or producing enough traumatism to set up a phlebitis with general infection.

To say that all cases of inguinal adenitis should be treated by incision and drainage, or that all cases should be treated by complete enucleation would be incorrect. Each case must be treated according to the condition found, to-wit: a simple, single bubo should be incised, curetted, or wiped out; with the application of iodine or carbolic acid and gauze packing.

Large masses of glands that belong to the superficial group, that are more or less circumscribed, that contain pus, but are not completely broken down, come out readily and easily in one ball-like mass when enucleated. And in my opinion, this is the treatment of election in such conditions. Should you find that the deep glands are involved, they should be removed cautiously along with the superficial one. The wound is closed and drainage is supplied at the lower angle. Large masses of glands with peri-adenitis and oedema of subjacent parts, especially if they contain multiple abscesses, do better with free incision, curette, partial enucleation and drainage.

Tight bandaging, aspiration, and the local application of heat, etc., have their place in the early treatment (abortive). The above ideas as to the proper treatment are those of the writer, and may or may not be correct. I hope that the paper will, at least, bring forth a free discussion.

DISCUSSION.

DR. E. E. REISMAN, Chattanooga: There is no doubt Dr. Newell has dealt with a subject that is more than of passing interest, because it is a condition so commonly found, not only in the practice of surgery, but in connection with the work of the general practitioner as well.

I think Dr. Newell's emphasis in each instance that syphilis, gonorrhea and chancroid were eliminated each time, shows conclusively that the majority of these infections are the result of those three conditions, and next to them in importance I think is that of injury to the lower extremity. The great majority of cases undoubtedly show that inguinal adenitis is the result of either syphilis, gonorrhea, chancroid infections or infections of the lower extremity. I have had considerable experience in gonorrheal treatment of these cases, and I have found that the glands naturally tend to become inflamed with most cases of gonorrhea. This inflammation is usually mildly acute, and rest in bed and the application of cold usually suffice. Sometimes they go on to suppuration. When they do, they should be incised and drained promptly. The extensive cases undoubtedly follow neglect of the acute cases. In one case I had, the man had treated himself with ordinary astringent injections and proprietary preparations, which he had obtained in a drug store. The inguinal glands of the left side suppurred, broke down, first one and then the other, so that when he came to me for treatment he had a most extensive involvement of the fascia of the thigh, which was so great that he had all the symptoms of septic infection. He was placed in the hospital and remained there for nine weeks. He had to have several incisions made down the thigh and above Poupart's ligament as well. These cases, if you take them early and incise them when infected they will promptly yield. The hardest cases to handle are the chancroidal infections. Somehow, if you open them and drain them, you do not get good results. The glands break down and suppurate and continue to suppurate, they drag along with a discharging sinus, and finally you have to enucleate them. If you can treat these cases without radical procedures, it is well to do so, but some of them are so extensive that you have to resort to surgical means. I think, of course, you should try medicinal measures, but undoubtedly the radical procedure is the best.

Dr. Newell mentioned some cases which we see occasionally. I have had two of them myself. They give no history of ever having had three of the more common causes of this condition, but they got an infection and we do not know how. I remember a case I had a year ago in a little boy, nine years of age, who had never had an injury which the mother could account for. He had never had any venereal infection. He had a prominent mass; it was not soft, not the ordinary broken down gland you would expect. It was hard, and we considered conditions that could produce that, and finally decided that he must have an inguinal adenitis. He had considerable temperature with it, and radical removal was advised and the gland was taken out. It was a very hard gland. It was beginning to break down; there was considerable inflammation in the adjacent tissue. A specimen from this case was referred to the pathologist and we were never able to determine what variety of infection he had nor how he got it. From my own observation I do not believe medical measures are of very much value. I do not think we get good results from medical treatment if we do treat them, and we run the chance of getting more extensive involvement and finally surgical measures are necessary for relief. When you have these cases to deal with in which there is considerable involvement of the tissue, radical removal is the best. They heal quicker, the results are permanent and more satisfactory.

DR. W. B. ST. JOHN, Bristol: Dr. Newell has given us an interesting and practical paper. There is only one point that has been suggested to my mind in reference to it, and that is, in some of these obscure cases the trouble is possibly due to the smegma bacillus. I have had several cases that to my mind were caused by this bacillus and circumcision afforded relief. Of course, it does not stop the bubo, but it stops the infection.

He did not mention the herpetic condition, which is sometimes responsible for the infected gland.

In some of the epidemics of glandular fever among children you have not infrequently inguinal adenitis, as in the post-cervical region. These cases do not go on to suppuration.

DR. GEORGE LIVERMORE, Memphis: I rise to utter a protest against opening bubo. Of all treatment that has ever been instituted for the treatment of bubo, simply lancing and packing it is about the worst. I saw quite an extensive experience along this line in Germany where they open these bubos and leave the gland to slough out of itself. Sometimes these patients are left for months with suppurating sinuses and a discharging condition, which is objectionable from many standpoints. If you lance these bubos and partially curette the glands, it will not heal until all the gland tissue has sloughed out and you will have a discharging sinus for a long time.

If you open these bubos thoroughly, take out the glands, and get rid of the infection, it will heal itself.

In regard to the nomenclature, I think there are two conditions. Where it is simply an inflammatory trouble it should be classed as inguinal adenitis, but where there is the formation of an abscess or pus, the name bubo is applicable.

With reference to this abortive treatment, I do not think any of them if they get a good start can be stopped positively. By putting the patient to bed, applying a tight bandage, using a pure application of ichthyol, with a tight cotton flannel bandage, which keeps up elastic pressure, and using an ice pack, in a great many cases, we can abort the condition.

I have had some results with the use of vaccines where we have gonorrheal infection, using a mixed vaccine. Where there is no history of gonorrhea, the mixed vaccine without gonococci seems to do good.

In regard to the treatment, do not lance the bubo unless you take out the gland. If you lance the bubo and leave a part of the gland tissue, you have a suppurating sinus for a long time. It leads to infection in another gland and you have the same condition to go through again. I have seen men in Germany lance a bubo fifteen times on one side, then on the other. Sometimes the whole gland tissue sloughs and it heals nicely, but in the majority of cases it does not heal promptly.

Iodoform injection is the operation of choice when we have pus, and pus localized. Please remember that it must be localized pus and not extensive pus. Where we have pus with involvement of four or five glands, the injection of iodoform in most instances is unsatisfactory, and it should not be called an emulsion but an ointment, because an emulsion is far from satisfactory as compared with an ointment. It should be made of ten per cent iodoform and vaselin, and a small quantity of white wax to give it a stiff base, so that it will be thick and not run easily. If you have a circumscribed abscess to deal with, wait until fluctuation is thoroughly developed, then make a small incision in the most fluctuating portion and evacuate the pus. The cavity should be cleansed thoroughly. Do not make a large incision, but one about one-quarter of an inch long, evacuate the pus through the incision, and wash the cavity thoroughly with equal parts of water and peroxide, and follow this with bichloride of mercury solution until the solution comes away clear. After the cavity is cleaned, heat the ten per cent iodoform in white wax until it is liquid, and inject it into the cavity, and with the other finger massage the cavity all around so as to force the ointment through every part of the cavity, and then put a cold bichloride compress on that. This will harden the ointment in

the opening to make a plug, so that the softened ointment will not flow out.

DR. NEWELL (closing): I appreciate this discussion very much. I did not read this paper with the intention of teaching medical men what to do, but more particularly to get help, there being such a divergency of opinion as to what was the best treatment. There are men who do not believe in removing these glands, and those who do, among them Dr. Guiteras and Dr. Keen.

ORTHODONTIA.*

By N. C. Leonard, M.D.,
Nashville, Tenn.

The recognition of certain deformities of the internal facial structures and their treatment by artificial stimulus with fixed mechanical appliances for the correction of mal-occlusion of the teeth has developed, almost within the memory of your essayist, into a science of great beneficence to the present generations and of magnificent promise to those of the future.

While the correction of irregularities of the teeth has been practiced to some extent for a very long time, it would seem that it is only within very recent years that its great possibilities have been recognized and efficient methods and appliances systemetized.

It is with a view to interesting the physician in a closer observation of children in need of such treatment during the most important years of their physical development, as well as of those of mature years, that this paper is presented.

It needs but the most casual investigation to discover that a very large per cent of the people with whom we come in daily contact have been deprived, through faulty development of the facial structures, of very important benefits which nature had originally planned for them.

A careful study of the relations of the dental arches and their superimposed structures, together with the correlation of functions of these contiguous parts, would alone create a strong presumption in favor of the benefits of modern orthodontic treatment in certain

conditions of impaired function, had not experience and practical demonstrations settled the question definitely.

I think it is fair to assume that nature's intent is to so construct and arrange the different anatomical parts that perfect function will be secured within limits of countour that will do least violence to our esthetic sense, and that any failure of such correlation of part and function is due to some interference or interruption of these plans. It is the anticipation and early recognition of the causes of arrested or perverted developmental processes that should be the first consideration of the orthodontist, though, unfortunately, he is seldom consulted in time to avert, even where it might have been possible, many very troublesome conditions.

Crowded and irregularly arranged teeth with faulty occlusion with those in the opposing jaw is usually only a symptom of undeveloped bones too small to allow the eruption of the full number of teeth in their normal relations.

This lack of development in the bones containing the teeth may be due to one or more of a number of causes, primarily, such as infectious diseases of childhood, faulty metabolism, lack of normal muscular stimuli through perversion of muscular action, as in mouth-breathing, thumb and finger sucking, premature loss of the temporary teeth, destruction of permanent tooth germs, early loss of one or more permanent teeth, etc.

As a clear and brief statement in outline of the benefits and aims of Orthodontic treatment, I wish to quote from an article by an authority on this subject, Dr. Pullen, of Buffalo, in a current dental journal:

Orthodontia, or facial orthopedia, steps in when rhinology and ophthalmology have done their best for the child with deficient nasal and optical function, even deficient mental function, and offers at the present time the only hope for future operative treatment that will be of physical benefit. For orthodontic treatment is, in the young child, stimulative to normal development, not only of the dental arches, but of the superimposed anatomical structures of the face above and surrounding the dental arches, viz., the struc-

*Read before the Tennessee State Medical Association April, 1913.

tures of the nose and adjacent tissues of the internal face."

But at this point it should be emphasized that the greatest benefit from orthodontic treatment is obtained in the early years of childhood, when such pathological changes as arrested development of the maxillae or of the nasal structures are first apparent, and before conformation by several years of mouth-breathing with its many ills and abnormal development of the internal and external structures of the face, have shut the door to the best opportunity for effective treatment.

It should be understood, therefore, that orthodontic treatment is primarily aimed at the restoration of normal developmental processes, of normal nasal respiration, and of normal occlusion, which functions, when properly established and continued, mean not only the normal growth and use of the structures of the internal face and the production of harmonious facial lines, but the health and welfare of the entire body as well.

It is evident, then, that the greatest mission of orthodontia is not "strengthening crooked teeth," but correcting mal-development of both structure and function of the dental and maxillary arches, and thereby assisting development in the associated regions of the internal and external face.

The most important effect of such treatment when instituted at a reasonably early time is the growth of the bones in response to the artificial stimulus of well-adapted mechanical appliances adjusted to the dental arches, providing at the same time sufficient room for proper arrangement of the teeth, and increasing through the same developmental processes the nasal openings, adjusting the orbital planes, and at the same time restoring or establishing good facial lines and countour.

A close study of the intimate relations and interdependence of these internal structures of the face in their proper arrangement will provide sufficient evidence to justify the conclusion that any deviation from normal relations in one region would modify to a greater or less extent all the other related structures. Thus it is, as has been fully demonstrated in

the examination of specimens, that an undeveloped dental arch means an undeveloped nasal cavity, and vice versa, and that whatever interferes with the development of the one will interfere with the other, as also whatever stimulates the development of the one will aid in the development of the other.

In discussing the proper time for orthodontic treatment in order to secure the most satisfactory maxillary development, Dr. Pullen says: "It is a matter of every-day practice in orthodontia to expand the dental arches, and by so doing to increase the development of the maxillary arches, hence, even without further argument, it can be assumed that the nasal structures and sinuses directly above the maxillary region receive at the same time an impetus to further development.

Again, when the early age at which orthodontic treatment should be begun is taken into account, the amount of added growth in the whole face, in response to artificial stimulation through expansion of the maxillary arches can be assuredly anticipated. For example, if in the skull at birth the relative proportions of the face and cranium are as 1:8, and the face increases in proportion to the size of the cranium more rapidly during childhood, so that the ratio at two years stands as 1:6, at five years as 1:4, at ten years 1:3, and in the adult 1:2, the resultant beneficial effects of expansion of the dental arch between the ages of approximately four and ten years are sure to be assisted by nature herself during these years of rapid downward growth of the face at a time when the bony tissues are most impressionable."

Faulty respiration due to a diseased tonsillar ring or nasal obstruction is perhaps the most frequent source of arrested or interrupted development in these regions, perverting as it does muscular action which normally affords the proper balance and stimulus to these developing areas, within the thin bony walls of which are contained the crowded and partially formed permanent teeth during the most important years of development of the child. Mouth-breathing and its attendant muscular perversions usually produce a narrowed dental arch with crowded and irregularly arranged teeth, and often abnormal relations of the opposing jaws.

The occlusal surfaces of the teeth are so constructed anatomically that the planes of contact or occlusion will fit the opposing ones only while in their normal position. This means that to secure normal occlusion of the teeth contained in the mandible and maxillae the dental arches must be of the exact width intended by nature, each tooth in its proper place and alignment, and the relative position of the two jaws correct. This is really the key to correct orthodontic treatment, and thus it may be seen that the proper adjustment of mal-occlusions of the teeth means also normal adjustment of the bony areas about the roots of the teeth, the needed stimulus to contiguous bony structures and restoration of normal facial lines and contours.

Of course the degree of deformity or mal-occlusion of the cases we are called upon to treat vary within very wide limits from those producing the most distorted facial contour and perverted expression to those of but slightly irregular lines which disturb only the most acute sense of esthetic values.

For purposes of diagnosis and convenience all dental irregularities have been classified by Dr. Edward H. Angle under three general heads, these and their subdivisions including practically every form of mal-occlusion of the teeth.

The first division in this classification, which has been generally accepted as a convenience in diagnosis, includes all cases in which the mesio-distal relation of the jaws and dental arches are normal, and the first molars in correct occlusion.

The second class includes all cases in which the lower jaw occludes distally to normal, and the third class includes all cases in which the lower jaw is mesial to normal in occlusion.

With this classification in mind it is easier to diagnose and designate a given case that is to be studied or discussed.

While the easiest and most marked development may usually be secured, as has already been indicated, by treatment before the period of adolescence, successful treatment may be instituted at almost any period of life—certainly up to middle life, though the difficulties of tooth movement usually increase more or less with the age of the patient, and

the stimulus to the areas affected by interrupted development is not so marked in effect.

Many different forms and modifications of mechanical appliances are in use by orthodontists at present, but there has been for a number of years a tendency to discard all but the simplest forms, which have been found to be usually most efficient and most cleanly.

What is known as the clamp bands and expansion arch, with its different modifications, seems to be the most popular and effective form of appliance at present, this being a fixed device consisting of a bar extending around the outside of the dental arch between the necks of the teeth and lips and the buccal membranes, and fastened to the molars by adjustable clamp bands with tubular sleeves for the reception of the ends of the arch bar. To this bar, which is put in place under slight tension, the other teeth are ligated, and by frequent adjustments and well calculated and directed force the teeth are moved gradually into their proper relations.

However, a detail description of method or appliance would seem entirely out of place in this discussion, since the purpose of this brief essay is to suggest to the medical practitioner who is not entirely familiar with this particular branch of the healing art its broad possibilities for good in the restoration of impaired functions and the correction of facial deformities.

DISCUSSION.

DR. C. J. BROYLES, Johnson City: I think this Association should be very grateful to our Committee on Scientific Program for bringing this subject through the essayist to the attention of this body. To one who daily sees the many facial deformities and contracted arches and difficult breathing and the serious deformities of the face that are developed by these malformations, this paper is very important.

The trouble is that these conditions are not recognized until very late, in many instances, in the child's life, until the face has been deformed, the countenance rendered dull, and the arch so contracted that probably full correction can never be had. I, of course, notice these things more particularly from the standpoint of nasal deformities or deflected septa, or hypertrophy of the tonsillar arch, adenoids, etc. I believe that these things ought to be brought to the attention first of the general profession, but especially to the teach-

ers in the normal schools and through them to the public schools. The importance of the subject is not as fully appreciated as it ought to be at the present time. The treatment is obvious, to remove the cause and do so early, and the result will be complete. I refer especially to trouble in connection with the nasal cavities. These conditions can be relieved thoroughly if taken in proper time.

I wish to thank Dr. Leonard for his paper, and I hope the subject will be discussed freely because it is one of great importance and of great interest to everybody, and especially to men who have given it any attention.

DR. RICHMOND MCKINNEY, Memphis: Dr. Leonard has presented a very interesting subject, one which we are all very much interested in at the present time, on account of the relationship that this subject bears to the question of adenoids. We do not fully appreciate the fact that when we operate on children for the removal of adenoids at eight or ten up to fourteen and sixteen years of age we do not get as good results as we would get if we operated on them when they are young. If these patients are operated upon for adenoids when they are young, they would not so frequently have to go to the orthodontists. When the children are more advanced in years, if you send them to the orthodontists after removal of adenoids the arch is spread, normal breathing is established, and the facial contour becomes restored, but in the very young patients spreading of the arch is not required.

I think Dr. Angel was the first great American dentist to advocate rapid spreading of the arch in children over ten or twelve years of age. If you take children from this age on to sixteen and spread the arch rapidly you will get about as good results as we do when we operate on the cases that are very young. There is more than one dentist in Memphis who send me cases frequently for the purpose of having an adenoid operation done before they spread the arch, they appreciating the necessity of removing the adenoids first and spreading the arch afterward.

This paper is very interesting and instructive, and such teaching should be spread before the public just as the indications for adenoid operations have been disseminated by means of the Ladies' Home Journal, the Saturday Evening Post, and other lay publications.

DR. JOHN JELKS, Memphis: There is one phase of this discussion that I wish to refer to particularly. While listening to the paper I was reminded of a frequent experience I have had in my office and in my work, that of intestinal auto-intoxication, faulty digestion, and faulty metabolism, and I was rather surprised the doctor did not refer more to this feature in reading his paper. Oftentimes I have found it necessary to send these cases to a dentist. If you have faulty mastication,

if you have a faulty arch, you therefore must have many children especially, and adults likewise, with faulty digestion and faulty assimilation, and sooner or later you will have graver gastro-intestinal disturbances. I would like the author of the paper to emphasize that feature in the closing of his discussion.

DR. F. B. REAGOR, Shelbyville: I want to speak of one thing in connection with the paper and subject which I regard as being of great importance, and that is the proneness on the part of the physicians to look on things concerning the mouth as of very little importance and belonging to the dentist entirely. We are prone to neglect many of the important structures about the mouth that come to our notice first. If we can prevent these conditions that the gentlemen have so correctly spoken of, it is much better than to cure them after they have been established. If we noticed these conditions earlier, we would have a great tendency to benefit these individuals and help to keep these conditions from developing.

One thing I want to impress especially, is the care of first teeth of children. The laity do not realize what that means nor do many physicians. For instance, let us take the deciduous teeth, they are allowed to decay very early many times, and they are allowed to be shed before the time comes. Let us take the six year molar, if the teeth are destroyed early, the six year molar comes forward in the arch to take its place and erupt farther forward than it would do if left to the proper time to erupt, thereby encroaching on the permanent teeth when they come through and thus bringing about a deformity. It is a similar matter to preserve these teeth at an early age by giving them proper attention. The laity thinks it is preposterous to take children and have their teeth filled. I practiced medicine a long time before I gave it a thought. We see that one condition frequently, and if we would pay more attention to it we would do great benefit to the people who we serve.

Another thing I would call attention to is the habit of people allowing their children to suck their thumbs, or to use foolers. This destroys the nasal arch and brings the teeth out and ruins the arch.

I want to thank the essayist for bringing this subject before us. It is a subject to which we should pay more attention. The care of the teeth in the early part of life will help to prevent many of the conditions to which our attention has been called.

DR. LEONARD (closing the discussion): I appreciate very much the attention that has been manifested by those who have discussed this subject. I think it is a subject worthy of the attention of all medical practitioners, because it is one that we all come in daily contact with, and there are conditions that can in many cases be prevented. Of course, in conditions like these—like

most pathological conditions—it is much better to prevent than cure them after they have occurred.

I would like to emphasize one point, namely, that there seems to be a popular idea among those who have given the subject but little attention, that the correction of irregularities means simply placing the teeth in a corrected position, when in reality, what we accomplish, the ideal result we achieve, is the stimulus of the bone that contains the teeth, the development of the bony areas above the teeth in the entire facial structure. It is the bone growth stimulated by the mechanical appliances that put these areas slightly under tension and hold them there, and it supplies a natural stimulus that has been interrupted by some pathological condition, usually adenoids, or some disturbance to the other functions.

As to the remarks of Dr. Jelks regarding gastro-intestinal infections and their relation to this particular condition, I would say the temporary teeth are seldom irregularly placed. I do not mean it is only in childhood we have these gastro-intestinal disturbances, but I presume that is what Dr. Jelks meant. The temporary teeth are developed and are arranged before the bony structures are developed. For that reason they are seldom out of the proper alignment, so that the occlusion of the temporary teeth is usually very good, and while the decay of these teeth is very important from the standpoint suggested by the gentleman, it is not often that irregularity interferes with the proper function of the teeth in early childhood before the permanent teeth are erupted.

SUPPURATIVE APPENDICITIS.*

By J. Hugh Carter, M.D.,
Memphis, Tenn.

There has been a constant warfare between the physician and surgeon as to the pathology, prognosis and treatment of appendicitis since Dr. Fritz's famous article published in 1886. And even more so, if possible, between the surgeons as to the pathology and treatment of the suppurative type of appendicitis. In order to treat this type of appendicitis intelligently I believe one should know the anatomical relation and position of the appendix. The appendix is a small immature bowel attached to the lower end and back portion of the caecum, situated in the right side in a small portion of the peritoneal cavity and is

completely surrounded save the inner side. In front is the caecum, the outer side and behind the abdominal wall, below the pelvic cavity and inner side by the small intestines and omentum, which is always ready to block this opening when there is danger from within.

In using the term "suppurative appendicitis," I wish to be understood as referring to acute gangrenous or perforated, and in which there is always beginning general peritonitis. The cause of suppurative appendicitis is poor drainage and infection. We may have an acute infection in the appendix without causing any serious trouble if the appendix is draining well, as we often see in acute salpingitis; and with proper treatment recover spontaneously. But we must remember, after the appendix has once been inflamed, it seldom returns to its normal condition, therefore drainage is more or less interfered with, and for that reason is more liable to become infected. There are but two conditions in which the above does not obtain. One in the rare case in which a patient recovers from an acute attack in which the appendix is entirely destroyed, and the other is in a case in which the obliteration of the lumen begins at the distal end of the appendix and progresses uniformly towards the caecale end.

As I have already stated in this paper, from the position of the appendix, and the fact that it is a blind sac, and its opened end being upwards and containing, at all times, more or less bacteria, this being true we can see why it is a normal appendix is so liable to become inflamed. Therefore, it does seem to me that all physicians would agree upon some plan of treatment which would be much more favorable to the patient. A man is in no way physically impaired by the removal of his appendix; this being so, it does seem to me, the curative treatment is surgical. Therefore we should remove the appendix, if possible, while the infection is confined to within the appendix, as 95 per cent or more of all cases begin within the appendix, there is a time when the infection is confined within, and this is the time when the appendix should be removed, as all surgeons with experience have agreed;

*Read before West Tennessee Medical and Surgical Association May 8, 1913.

provided a competent surgeon can be had and other conditions favorable.

One might ask how are we to know when the infection is confined within the appendix. In acute appendicitis it is impossible to say just how long a time the infection will remain within the appendix, but from past experience if I see the patient within the first twenty-four or thirty-six hours from the beginning of the attack, I feel justified in assuming that the infection is still within the appendix, and, therefore, advise the patient to be operated upon at once. When I do not see the patient in the first twenty-four or thirty-six hours from the beginning of the attack of acute appendicitis, the following treatment is carried out: Patient is kept in bed absolutely at rest with hot or cold applied to the appendiceal region, codine sulphate is given, if there is much pain, hyperdermatically, and if patient is sick at stomach and vomiting, the stomach is washed out with hot saline solution (normal). This should be repeated as often as necessary. No purgatives or medicines are given by the mouth. Strychnine nitrate, digitaline and oil mustard is given hyperdermatically if indicated. Normal saline is given four ounces every four hours by rectum. If the patient is in hospital or in care of trained nurse, the saline is given by the Murphy method. No treatment should be given that would have any tendency to increase peristalsis. The object of this is not curative, but to relieve the attack and to cause the infection to become localized, even if the appendix has ulcerated or become gangrenous.

Dr. Ochsner has gone so far as to say if this line of treatment is carried out in full we can predict with as much certainty as in any disease that we have to treat, just what the outcome will be. By this he means from the peculiar situation of the appendix and its surroundings, even if the infection is not confined to within the appendix, it will become localized or walled off when the abscess can be opened and drained with but little danger to the patient. It is possible under this treatment that the infection may be absorbed, even if the infection is without the appendix. This treatment should be con-

tinued until all symptoms have subside or the infection has become well localized, when the patient can be prepared and operated upon with safety. I wish to report twenty cases of this type, classified as acute perforated or gangrenous without abscess formation five, one death.

This group of five cases is most interesting from the fact that nature with the proper help, or even if left alone with the omentum and plastic exudate from the peritoneum, entirely surrounds the appendix, or the infections may be completely destroyed, only leaving a part of the appendix, as three of these cases were. In two there had been a diffuse peritonitis. The patient I lost was seen by me on the night of the third day; temperature 102, pulse 120, and respiration 26, the abdomen, rigid and tender to pressure. The patient was sent to the hospital. The following morning temperature being 99, pulse 90, we operated believing the infection was still confined to within the appendix. But on entering the abdomen I found a gangrenous appendix sloughed in two, surrounded by a small abscess. The stump of the appendix was removed, drainage tube inserted, wound dressed and patient sent to bed. The third day peritonitis develops and on the seventh day patient died. Here, I am afraid I used poor judgment, and my patient died. I believe had I waited until abscess had become well walled off the patient would have recovered. The acute appendicitis with abscess formation, fifteen cases, no deaths.

In this group, the condition was similar to the one above, save that nature was unable for some cause to destroy the infection, but did throw a wall, as it were, around the appendix with the aid of the omentum, peritoneum, and small intestines, thereby localizing the infection. This we might say, was done until the past few years without the aid of the doctor, or in many cases, in spite of him. That is, the doctor would not put the patient at absolute rest in bed and abstain from giving diet and purgatives in some form by mouth when patient was already, perhaps, nauseated and vomiting, which would only increase or aggravate the condition. After this treatment had been kept up for days and patient con-

tinued to grow worse, then a surgeon was called for and he too, usually made the same mistake by advising an immediate operation, thereby adding fuel to the fire and so often the patient would die in a short time following the operation, while if the treatment advised in this paper is carried out, as has been by Dr. Oehner and his followers, ninety to ninety-five per cent of the infection will become localized when the patient can be operated upon with perfect safety in most cases.

APPENDICITIS WITHOUT SYMPTOMS.*

By M. Goltman, C. M. M. D.,

Professor of Clinical Surgery, Medical Department, University of Tennessee, Surgeon Memphis City Hospital, Baptist Memorial Hospital, Etc.

At this day and date when caecum mobile, Lane's kink, Jackson's membrane, colonic ptosis, gastro-intestinal ptosis, diverticulitis and intestinal stasis are in the limelight as conditions demanding recognition and relief the matter of diagnosis of diseased conditions relating to the much abused, important, and surgically prolific organ—the appendix becomes of even greater importance than ever before. Given a well defined case of appendicitis there is little difficulty in making a diagnosis and still less difficulty in shaping a course of treatment. With an obscure systomatology the difficulties of diagnosis are many and the treatment in consequence haphazard. To hold a straight and narrow view regarding this subject which, to be understood, must embrace a physiological and pathological knowledge of the caecum and colon as it is known today, is childish to say the least. The view of a prominent Western surgeon who promulgated the dictum that there is no appendicitis without fever is narrow, even though it may be true in his practice, other surgeons have had experiences which are at variance with this teaching and also frequent enough to warrant the exceptions some consideration. There are cases of undoubted appendicitis without fever and elevation of pulse

rate just like there are cases presenting the almost text book exterior without showing anything like an appendicitis interior. These little appendices without visible earmarks have nevertheless received, after the indignity of removal, many dignities, even to the extent of having a doctor's name attached to their tail end.

Were it not for the fact that occasionally the organ is enlarged the tip of the appendix is a small thing indeed to tie one's name to, but remember, gentlemen—it is the appendix—the surgical meal ticket. It is a thing unholy within the confines of its intestinal recesses, but the holy of holies dangling daintily in a cut glass cologne bottle duly labelled, dated, dubbed and dismembered. No household is complete without it. Next to bridge and whist with the ladies they are the most popular things on earth with the doctors, but mistakes are made. Some time ago a confrere with the utmost seriousness related the removal of a peculiar appendix, which in reality was nothing other than a Meckel's diverticulum. Another surgeon has since removed the diseased appendix. The title of this paper is therefore misleading.

There is no pathological condition without symptoms, consequently there can be no appendicitis without symptoms, but since the cases we wish to bring before you each and every one presented misleading symptoms, the caption, while misleading, is deliberately adopted to serve the purpose of harmonizing the old subject of appendicitis with the comparatively new knowledge of Lane's kink, Jackson's membrane, etc. So great is the interest in this subject that even the sedate and matter of fact Englishman has become encompassed by the glamour of Lane's kink, caecum mobile and intestinal stasis to the extent that the hitherto much-abused appendix is about to be forgotten, unless it be remembered that ceco-colectomy is impossible without appendectomy. The humor of this situation is refreshing, particularly when it is furnished by an Englishman something like this: A young lady from Australia is referred to a noted London surgeon for removal of the gaserian ganglion for the relief of obstinate facial neuralgia. This surgeon does not remove the

*Read before the Dyer County Medical Society March 6, 1913.

ganglion because he does not believe in the operation, but he does remove the caecum and entire colon, and because the young lady's headache does not return for three months, she is pronounced cured. This was related by the surgeon himself with the true pathos of English innocence which so frequently stimulates the risibility centres of his American cousin. And thus it is that history repeats itself and the path of beaten mistakes is reploughed and replanted with the seed of new mistakes that always follow in the wake of early surgical enthusiasm in fields that are new.

There was a time when the surgical dietum was blazoned upon the scroll of surgical progress that in appendicitis an operation was to be performed as soon as the diagnosis was made. Many victims paid the penalty of this early enthusiasm in the surgical history of the appendix, but it served to stir the surgical conscience to the extent that this illogical practice was given a jolt, the effect of which was that the patient—the sufferer was again given his due. Today the surgeon treats the sufferer from appendicitis—the patient—not the disease, and when the glamour of Jackson's membrane, Lane's kink, gastro-intestinal ptosis and stasis has worn off, and the physiological will have been separated from the pathological the chances are that a few more surgical relics will have found their way into the heap of surgical discards. Please do not misunderstand me. As a teacher of surgery I would be unmindful of the progress of the day were I to relegate as unimportant the various conditions already so frequently mentioned in this discussion. Jackson's membrane exists. There is no doubt about it. I have seen it many, many times when I did not know what it was and I have seen it many times since I do know what it is. One thing is certain, it does not always represent a pathologic condition. To the contrary, it only occasionally does so. Neither can it be demonstrated, as is frequently done, through a gridiron incision. It might be fittingly termed an embryological accentuation.

Lane's kink is too well known to require comment at my hands, but to attribute to this condition the gall bladder disturbances as well

as many other ills that flesh is heir to, is about as senseless as is the position of the so-called orificial surgeon who invariably finds in a contracted canthos or urinary meatus a good explanation of otherwise unexplainable symptoms.

Gastro-entero-colonic ptosis are demonstrable entities the symptomatology of which is analysed by the neurologist and the orthopedist in an entirely different manner than by the surgical pathologist. Just because bismuth mush shows the colon in X-ray pictures to be away out of its normal position is not efficient justification for its removal or for short circuiting it. X-ray pictures are true since they are portraits that portray. It is the interpretation which is at fault. The Germans, strange as it may seem, are more alive than we are to this possibility of error in X-ray pictures and guard against it by observing the movements of the colon direct with a highly sensitive fluoroscope.

Colonic ptosis makes interesting literature and still more interesting pictures, but without well defined stasis and symptoms should be left alone. These conditions are usually congenital, sometimes acquired and occasionally are mistaken for appendicitis when appendectomy does not relieve the symptoms. These facts enhance the interest of this subject as it should be understood today. From all this the conclusion is forced upon us that we must consider the entire caecum, colon and intestinal apparatus from a comparative standpoint in order to understand the veriform appendix.

Physiology teaches us that the alimentary canal responds with much readiness in its structure to variations in functional demand and that changes in anatomical structure are most marked in the region of the ilio-colic junction where the caecum and appendix form (Kelly).'' This is where we find Lane's kink, the presence or absence of which should be demonstrated and relieved if necessary in all appendectomies. The caecal pouch acts as a reservoir for partially digested substances, allowing of admixture with secretions from the small intestine and subsequent absorption. In all mammalia with prominent caecum a fold of peritoneum passes to it from the ileum.

This fold comes from the margin of the ileum farthest from the mesentery, and is attached to the side of the caecum nearest to the ileum. This, according to Treves, is the true mesentery of the caecum and has nothing to do with its blood supply which comes from the ileo-colic artery, which separates its anterior and posterior divisions. These arteries draw or push the peritoneum into folds, forming an anterior and a posterior fold, of which the posterior forms the meso-appendix. These folds also form the ileo-colic fossa in the angle between the ileum and colon and the ileo caecal fossa which occupies the ileo caecal angle.

The retro-caecal folds depend entirely for their existence upon the coalescence of the colon, caecum and mesentery with the posterior abdominal wall and serve to hold the saecum in place. These various fossae are deep or shallow according as the fusion is complete or incomplete. If, in embryonic life, the ileo colic portion of the intestine becomes adherent comparatively high, it will result in imperfect rotation and fusion of the peritoneal layers and the caecum will sag downward and give rise to caecum mobile in later extra-uterine life. If the appendix becomes attached to the abdominal parietes before the caecum descends into the iliac fossa it assumes a retro-colic position, curving downward and upward in the direction of the kidney and gall bladder. Thus it is seen in the embryo that the rotation and fusion of the large intestine with the parietal peritoneum is subject to many variations, giving rise to folds which may be very complete or very incomplete. Jackson's membrane is one of these folds, and therefore merely an intensified congenital condition which unless it gives rise to constricting bands and kinking and stasis had better be left alone.

From this comparative study it becomes very evident that right sided abdominal distress is not always relieved by appendectomy, even though the appendix may be kinked, bound by adhesions and showing internal evidences of chronic inflammatory change. These changes in the appendix may be secondary if these secondary changes result from a movable caecum with a Joekson or pericolic membrane giving rise to kinking and stasis, this condition will have to be relieved

before any relief from symptoms is to be expected. This statement is made merely to qualify the position assumed by the writer, to-wit: That undoubted appendicitis occurs, and this quite often, which does not present the features of localized pain, fever, increased pulse rate, rigidity, vomiting and constipation. Let me here report a very recent experience.

Negress, eighteen years old, was seen by ambulan surgeon Rainer, at her home, giving history of pain in the stomach. Temperature was normal, pulse was normal, there was no vomiting, no nausea, and the bowels were easily moved. She had had other attacks of this nature, but did not know how many. There was distinct muscular rigidity to deep palpation over the appendix, and on the strength of this symptom, she was admitted to my service at the City Hospital, February 3, 1913, and after determining that there was no pelvic pathology, an operation was done at once and revealed a kinked and adherent appendix, which was removed. There was no Lane's kink. Recovery was uneventful. A somewhat contrary case to the above is the following: P. R., age eight, was taken sick with "stomachache" January 26, 1913. I saw him the following day when he had fever 104, pulse 130, no nausea and vomiting, the bowels had moved, but he complained of a "funny feeling in his stomach." The belly was soft and there was no muscular rigidity except to very deep palpation over the appendix, but even this was confusing for the reason that one time the rigidity would be over the appendix and again it would be over the region of the stomach and gall bladder. Respiration was not increased to speak of and the lungs were clear, thus eliminating the possibility of a referred pain. The urine was concentrated, very slightly albuminous, but without other evidences of nephritis and the blood showed a distinct leukocytosis. The boy's parents were out of the city, an aunt looking after him, and since his symptoms showed no amelioration I made a free incision through the right semi-lunaris in order to have ample opportunity for free observation and inspection of the abdominal viscera. The appendix was free, considerably distended with mucus and was removed. There was

no Lane's kink or pericolic membrane, and the gall bladder was full of bile. The boy made an uninterrupted recovery. In this little patient operation was deferred for nearly twenty-four hours because of lack of localizing symptoms. The contents of the appendix was not submitted to bacteriological analysis, but in all probability it would have shown a rather virulent growth of probably colon bacillus. The temperature dropped immediately following the removal of the appendix. The pulse rate dropped gradually.

J. L., age twelve, was taken violently sick January 17, 1906, with pain over right kidney extending over navel and into the urinary bladder. There was frequent micturition, the urine came in drops, accompanied with straining and considerable pain. Fever 102 1-2, pulse 119, nausea and occasional vomiting. Never had any attack resembling this before. Urine was concentrated, highly albuminous and full of urates and uric acid crystals, as well as uratic casts and gave a peptone reaction. I have never seen a greater abundance of casts. There were numerous red blood cells present. The blood showed a distinct leucocytosis. Physical examination was negative except for scars in the neck from which I had removed the cervical glands completely on both sides. There was slight muscular resistance over the appendix in front, but palpation over right kidney was very painful. The temperature fluctuated for several days and symptoms of sepsis, including sweats, were in evidence, when the parents consented to operation. An incision over the right kidney showed this organ in slight inflammation. This was disappointing since a peri-nephritic abscess was expected. Bimanual examination with the fingers in the wound in the back revealed a retro-caecal mass, which was tunneled into with the fingers and a large quantity of foul smelling pus evacuated and the cavity drained with tubes and packing. Recovery was uneventful.

This was undoubtedly a retro-caecal suppurative appendicitis, the abscess forming over the ureter, causing a congestion and inflammation of the kidney and giving rise to all the symptoms of renal calculous nephritis and peri-renal suppuration. I have had sim-

ilar experiences to this case, but find less trouble in diagnosing them.

J. P., age thirty-two, white, a rather heavy drinker, complains of biliousness. He gets these attacks quite often and after vomiting feels better. There is "some hurting in the pit of the stomach, but no great pain." He says he never had an attack of appendicitis. Physical examination is negative, outside of slight pain and muscular rigidity over appendix. Temperature is normal, respiration is normal, pulse, normal. Urine shows a few pus shreds, otherwise normal, blood shows a very mild leucocytosis, analysis of stomach contents negative. This patient was observed for several days in the hospital, and at no time did he have any fever or elevation of pulse rate. The morning temperature was, as a rule, 96 or 97 degrees F., the evening temperature 98 to 98 1-2. The bowels were constipated, but easy to move. Operation revealed a very large, anemic and very much thickened appendix, containing considerable mucus-pus, but patulous in its entire extent. A very mild Lane's kink was in evidence, which was easily relieved. The gall bladder and other viscera were found normal. Recovery was perfect. Here we have a case with very bad appendix, but with practically no symptoms other than the slight rigidity and leucocytosis.

On February 1, 1913, I was called to the City Hospital to see a negro who had been shot in the back while asleep, the ball entering over the posterior superior spine of the ileum and ranging forward and slightly upward. There was great pain, but no evidence of shock, temperature and pulse being normal. There was dullness in the right flank and the track of the bullet being followed into the posterior abdominal cavity, an incision was made at the edge of the right rectus muscle sufficiently long to allow plenty of room. The caecum and first part of the ascending colon were found pushed forward by a large retro-peritoneal collection of blood, but the peritoneum was intact and the bowel not perforated even posteriorly. The wound in the back was also enlarged and packed loosely and drained with gauze. A most interesting condition was found in the abdominal cavity. The appendix which was removed was curled on itself

and shaped with the tip point toward the caecum and bound down by dense adhesions which evidently pulled on the ileum near its junction with the caecum forming a distinct kink, which was divided. In addition to this, there was present a much thickened pericolic membrane producing kinks and dividing the upper caecum and ascending colon into a series of pouches. The right kidney was quite movable, but nothing was done to it, as infection of the posterior wound was expected. The question at once arose what symptoms did the Jackson's membrane, Lane's kink appendix give rise to? The negro in his past operative history confessed to feeling bad all the time, yet he is fairly well nourished. He suffers from constipation, swells up, has bilious attacks, headaches, vomits and "cramps at the stomach." He has no fever that he knows of. In other words, there is here a history of chronic appendicitis which diagnosis would have been qualified by the appearance of the appendix, but which simple removal of the appendix would not have relieved. In my judgment the original condition was a caecum mobile giving rise to a pericolicitis which in turn gave rise to a pericolicitis which in turn pulled down the ileum giving rise to a kink. While mere division of these kinks will not, as a rule, cure in the present instance, cure may be expected for the reason that the caecum will probably become firmly anchored posteriorly to the abdominal parietes as a result of the inflammation and suppuration in the back. This thought is justified by the fact that the patient says, and this in spite of his injury, that he is feeling better than he has in a long time; no doubt, because the intestinal stasis from which he suffered, has been relieved.

From what has been said the following conclusions are justifiable:

1. Pain and distress in the ileo-caecal region is not always due to appendicitis.

2. Appendectomy even in the face of gross pathological lesions in the appendix will not relieve the symptoms if the appendix lesion is secondary to, or combined with a peri-

colic membrane or Lane's kink, one or both interfering with the functional activity of the gut and producing stasis.

3. When the symptoms are not relieved by appendectomy there are good grounds to believe that one or both of the above conditions are present and producing stasis.

4. Jackson's or the pericolic membrane is merely an exaggerated congenital condition which should be attacked only in the face of stasis, which condition frequently simulates chronic recurrent appendicitis.

5. Since the caecum is the reservoir for the reception and absorption of the unabsorbed chyle its removal or the short circuiting operation of Lane are neither justified on physiological grounds or borne out by practical experience. Simply anchoring the ascending colon to the posterior abdominal parietes or the pocketing operation of Wilms is both safer and saner.

6. Appendicitis without fever and without increased pulse rate and without nausea and vomiting is occasionally seen, but no such case should be operated on through a gridiron incision for the reason that careful examination and inspection is almost impossible through this incision; better go through the right rectus or right semi-lunaris since kinking and stasis may require relief which can be given only through a free incision.

7. Referred pain over the appendix is frequent in children with beginning pneumonia and should be carefully excluded before administering an anesthetic.

8. Do not operate before investigating carefully by bimanual examination the condition of the female pelvis. The result of such examination may change materially the nature of the operation.

9. Retrocecal suppuration is best attacked through the loin, for the reason that it affords inspection of the kidney space, clears up the diagnosis and allows of splendid drainage without opening the peritoneum. No attempt is made, as a rule, to remove the appendix in such cases. I have operated on these cases under gas anesthesia since it takes but a very short time.

HERBA PANACEA.*

By W. B. St. John, M.D.,
Bristol.

Scientists tell us that the world is over a million and a half years old, and yet the earth was believed to be flat until the discovery of the "Herba Panacea."

For over a thousand years before this discovery, men were wandering over the then habitable globe seeking for something, they knew not what.

There was an unsatisfied longing for something indefinable.

Columbus sailed over the seas, presumably looking for new worlds. Raleigh possessed of an indomitable spirit of research, came with the hopes of gold, instead of gold he found the Sana Saneta Indorum.

But it remained for Doctor Francisco Fernandes to carry this marvelous find back to Europe, where its indulgence spread with wonderful rapidity throughout all nations of the world, from the sunny tropics to the snowy regions of the frozen poles.

Its fragrant smoke ascends alike to the blackened rafters of the lowly hut, and the gilded ceilings of luxurious wealth. As a result of this indulgence, men began to think; restlessness gave away to labor, and indolence to invention.

Watt saw the tea kettle. Newton the apple. Galileo the lamp. Harvey the living heart of the deer. John Hunter the antler of a buck. Adam Smith the wealth of nations. Copernicus the heavenly bodies. Lister the carbolized bug. Morse the electric spark that lit the world.

The history of this Herba Santa had a distinct relation to the birth of liberty. In fact, a true narrative of it, would be the history of English and American freedom. It planted an English nation in Virginia, and made a corporation in London so rich and powerful that it became a seminary of sedition. It was a potent element in the incentive of Bacon's rebellion—and a panacea to the House of Bur-

gesses. It was the bone of contention in the famous Parsons' Cause, that made for Patrick Henry his first triumph. It was the essential existence of the clergy, and the life of the church, and from it many parishes derived their names.

It was the financial medium of exchange between nations and furnished employment for the householder and the slave. It increased longevity and filled the three score years and ten with amiability, cheerfulness and good humor. It gave birth to comradeship and furnished freely the milk of human kindness. It created the avenue to sociability and is the pass-word today among men.

It is a quietus to care, an invitation to repose, a constant solace, and the best friend of balmy sleep.

Without it life would be filled with plutonian shadows, and incomprehensible anxiety, and men would again revert to that state of constant quest.

Its name is "Legion." But to Jean Nicot, who sent by Catherine de Medici to America, belongs the honor of spreading the knowledge of the use of this plant, in the scientific name of Genus Nicotiana.

The real name of this mystic plant, this rare super-excellent, silver-weed, which goes beyond potable gold and philosopher's stone, this Herba Panacea, Holy Herba, originated from a peculiar instrument used for inhaling its fumes, by the inhabitants of Hispaniola, and they called this instrument tobacco.

NEURASTHENIA.*

By R. O. Huffaker, M.D.,
Chucky City, Tenn.

With most of us there is an inborn curiosity to know why things are named as they are. To the child the story of the creation holds no more thrilling incident than that to Adam was given the opportunity of naming all creatures. To me the Garden of Eden was a menagerie and Adam was the keeper. I could see the great elephant standing before him, patiently

*Read before Tennessee State Medical Association April, 1913.

*Read before Greene County Medical Society April 7, 1913.

waiting for him to tell him what he was. Then there came rocking along a great ungainly creature with humps on his back and Adam just knew it was a camel by the way it walked. Anybody could name a hog, for a hog is a hog; but when it came to the rhinoceros the naming game was getting interesting. And so it has been since the days of Adam that men have found pleasure in finding suitable names for the objects their senses perceived. From the matchless language of the Greeks we have named the greater part of all diseases that affect mankind, and this brings us to Neurasthenia—neuron, nerve; astheneia, weakness.

In 1833 the name appears; again in 1867 VanDusen appropriates it in speaking of certain nervous disturbances, but not until 1889, through the famous specialist Beard, did neurasthenia receive the dignity of being a distinct disease, and next to malaria and dyspepsia, no name has ever been more acceptable to the doctor when he was uncertain as to what was the matter with a patient.

But while the name is new, the disease and abnormal conditions described are as old as humanity itself. Diogenes must have been a neurasthenic, afflicted with that form which covers the good that is in men with a veil of cynicism. Caius Cassius, with his itching palm and inordinate desire to attain greatness beyond his talents, was a victim of that kind of neurasthenia that has laid hold upon many a better man—disappointed ambition. Hamlet, already on the verge of a graver malady, brooding over the unnatural death of the king, and beholding the treachery of his mother and Polonius, found the nerve force failing. His sleep was broken, the pleasures about the throne failed him; flat, stale and unprofitable that he contemplated self destruction. Thomas Carlyle, fighting against an incurable disorder became life to him, even in his youth; the greatness of the human creature delighted him not and so profound was his weariness of the stomach, suffered for years the intolerable physical and mental pain of nerve exhaustion. These are a few historical cases and are not different from many cases we see today.

Medically speaking, neurasthenia means a functional exhaustion or debility of the nerv-

ous system due to impaired metabolism and autointoxication. Amongst the many symptoms the most constant is weariness—a weariness that the healthy man, be he ever so tired, knows nothing of and that neither rest nor silence can drive away. After a time this tired feeling becomes so exaggerated that aching sensations supervene. There are aches everywhere, from the crown of the head to the sole of the foot, new aches for the doctor to explain every time he calls. There are the strange fullness about the head, irritable temper, unusual mental activity lapsing into extreme dullness; lack of concentration, alternate hyperesthesia with numbness. And so are the wretched morning hours filled. In the afternoon the patient finds surcease from his burden; after all it is a pleasant thing to live. But this transitory feeling of well-being is but a part of the cycle through which the symptoms of the disease pass and with the coming night is the broken slumber. Some sleep deeply until after midnight, then awaken to watch, as it were, like a sentinel over themselves. Of all mortals the genuine neurasthenic seems the most unfortunate and most deserving of the physician's sympathy. The insane man has no burden like this, because for the time he has no mind; the drunkard can drink again, and the drug habitue turn to his hypo, but the neurasthenic is friendless, he keeps his vigil alone. The sounds of the busy street have ceased, now and then is the rumble of wheels, the footfalls of a belated pedestrian. In the country it may be the ceaseless singing of the cicada, the cricket's monotonous chirp, the baying of the dogs. It is the silence, however, that burdens. The mind, rested through sleep, works with abnormal activity, the memory function being strongest. A thousand things and scenes recur that have been along the way since early childhood. The sick man seems to have once lived in another world, so dim and remote are the pictures that come before him. A face appears, the features clearly visualized, of one whom he has neither seen nor thought of for years. The refrain of a song or strain of music long forgotten falls upon the sensitive ear. It may be a line or verse from some old poem. The odor of a flower fills the nostrils.

The flavor of some drink or viand returns to the tongue. Strange to say, these memories are not disagreeable in themselves, yet in their strangeness and intrusiveness is a sickening weariness, neither does sleep return till these memories become tangled and incoherent. Hope and planning play but a small part in the mental processes. The young shrink from thoughts of the conflicts that must come. With men who have passed the prime of life the contemplation of the future holds a deep sadness. He will never be greater than he is, he will never do more than he has already done. The dreams and ambitions of his strong youth have passed from him. To this negative view is now added the peculiar dread of death in the abstract that does not depress the young. He has no thought of immediate dissolution, there is no physical fear, yet he realizes that the greater portion of his earthly sojourn is behind him and that the many things that he meant to do will remain undone till the end.

So the days pass and the weary nights follow, and though not old in years, fears are in the way and he becomes afraid of that which is high.

I think this picture of the true neurasthenic is not overdrawn. Temperament, culture, ignorance, wealth and poverty—many things—might add light and shadows, but the picture is somber in its coloring.

It is interesting to study the causes of neurasthenia. Many think that it is a result of our over-strenuous civilization, forgetting that our modern way of living, hurried and nerve-racking as it is, has nothing in it comparable to the suspense and terrors of the endless wars and famines that oppressed the ancients. Be this as it may, the causes of neurasthenia are many. Worrying, overwork, jealousies, love unrequited, ambition unattained, sexual poverty, hazardous occupations, speculative business and the intense anxieties that are inseparable from professions like law and medicine, predispose to nerve exhaustion. Of direct causes none is more general than dyspepsia. (I use the word in its old meaning.) Many acute diseases from which the patients do not entirely recover, such as malaria, typhoid fever, La Grippe, etc. Women suffer much oftener than men. They have

disorders and diseases of the reproductive organs, enteroptosis, floating kidneys, etc. In addition to their physical peculiarity their mental and moral fibre is more delicate than that of men. They possess more pride, long more for affection, care more for beautiful homes, social standing, personal adornment and objects that cost money. When these desirable things are denied them they become discontented, lose their nervous energy and pass into neurasthenia.

Treatment. We should realize that those suffering from neurasthenia, although they may appear to be in good health and show few physical signs of disease, are in truth sick. Their life is not in danger as in pneumonia and other acute maladies, yet happiness is in jeopardy and wretched years may follow if they are not relieved. We are prone to neglect these cases, considering them as of secondary importance. They are not likely to die and can wait until our grave cases are off our hands. Yet it is our duty to save a patient from chronic invalidism as much as it is to preserve life.

In undertaking the cure of any neurasthenic a thorough investigation should be made of the patient himself, of his inherited weakness. The type of the disease should be ascertained, the many causative factors should be found out and whether of psychical or physical origin. If the disease is due to bodily infirmity correct this. Restore health to the digestive organs, improve nutrition, establish a more normal position for the displaced viscera and in the female overcome the pathological conditions that are peculiar to her. And never forget that you have a case of nerve exhaustion and that all the skillful gynecological treatment will fail of permanent cure unless the nerve force can be regained.

It is difficult enough to cure the neurasthenia due to morbid changes that are taking place in the body, it is much more difficult when the trouble is psychopathic. A great deal of the neurasthenia we encounter has grown from the seed of unhappiness and discontent, and eugenics is not within the physician's province. If we could give to the man who languishes for the honk of an auto a car, transfuse into the veins of the woman

who longs for social prestige the blue blood of the Pilgrims, bestow precious stones and fine raiment upon those that esteem a goodly appearance, we would perform many cures. Show Diogenes the thousands of good, unselfish men the bright sun shines on and he will not need his lantern. Give your Cæcilius—the soured and disappointed politician who has lost his nerve—a kingdom and the lean and hungry look will pass. He will sleep o' nights as thou dost, Anthony; he will see plays and hear music and his smile will not mock himself. Give the minister a large and appreciative congregation, the lawyer a wide clientele, the physician a lucrative practice, and new energies will quickly awaken.

But to speak less flippantly: People will listen to their doctor's philosophies when they will not heed the admonitions of the preacher. While the physician administers medicines to these unhappy patients he can help them to readjust their ideals, see a more peaceful, if not wider, vision. If they be rich and idle make plain to them the healing power of self-restraint and toil; if they be illustrious and broken on the wheel of fame show them the balm of rest and quiet. They may possess only the simple comforts who longed so much for luxuries. Many walk in obscure ways who tried in vain the paths of honor. Lead those who are not favored with wealth to lay hold upon the countless riches that may be theirs without money and without price, and to him who sought greatness and failed, throw light upon his obscure way that he may see that any man is great who has wholly done his part.

AMOEBIOSIS.*

By T. A. Mitchell, M.D.,
Nashville, Tenn.

In my experience and study of amoebic dysentery seven years ago I found the literature very unsatisfactory. It was said then by the vast majority of writers of our text books to be a tropical disease, and many were treating it with ice water enemas. The amoeba

was not accepted as pathogenic, but an etiologic factor, a carrier of Shiga's bacillus or bacillus entericus. My reason for offering this paper now is the hope that I may call attention to a few practical and important factors in the diagnosis and treatment of amoebic dysentery, that are not generally known and fully appreciated.

While it is interesting to review the evolution of the literature on the subject, I will not take your time in doing so, except in a concise case. Stengel says "the pathogenic importance of this organism cannot be fully established until cultures are obtainable, which thus far have failed" (1904); thus failing to distinguish the different types of amoeba, noting that they are found in the stools of healthy individuals. He admits, however, that, "the regularity of the occurrence of amoebiasis in certain forms of dysentery and their constant relations to the lesions are the strongest evidences in favor of their pathogenic role." Tyson, in 1905, says, in substance, that those who believe in pathogenic types of amoebiasis coli (which by their phagocytic action have included blood cells and blood debris in the sarcodes) claim as proof that cultures from secondary abscesses of the liver were bacteriologically sterile. This, he says, may be due to fault of method or fault of time. In the writes "about a dozen cases" (Tyson) he found some form of bacterium, usually one of the colon group. He infers, "although they are of minor irritative influence they do possess some agency," and yet he defines amoebic dysentery, "An ulcerative inflammation of the large intestine due to the amoebiasis coli."

Strong, in Osler's Modern Medicine, devotes thirty-six pages to amoebiasis, and while he presents the views of others, has little to say for himself, except on pathology which is exhaustive. He notes that Kruse and Pasquale after numerous inoculation experiments on animals, distinguished two varieties of amoeba found in the human intestine. They adopted the name amoeba-dysenteriae (Counsellman and Laffeur) as pathogenic and amoeba coli for the harmless variety, occurring in the stools of healthy persons. The latter they found in their own stools when no symptoms of the disease were present. Celli and Fiocca

*Read before Nashville Academy of Medicine, July, 1913.

described six different varieties in the human stools. *Entomeba histolitica* was found by Schaudin in the stools of those suffering from dysentery, contracted in the tropics. The plainly developed ectoplasm is more strongly refractive and hyalin than in *intomoeba coli*. Jurgens has already called attention to the "glassy hyalin appearance of the ectoplasm in the dysenteric amoebae," which is able by means of its stiff ectoplasm to penetrate between the epithelial cells. The harmless amoeba coli with thin soft pseudopodia can not enter into the healthy mucosa.

Craig confirms Schaudin's observations and says in addition, that "the amoeba dysenteriae are larger and when stained a diagnosis can be made by observing that the ectoplasm colors much more intensely than the ectoplasm; while in the amoeba coli, the reverse is true. "The amoebae coli is not actively motile in the stools and a vacuole is seldom seen." Wilson's Diagnosis (1911) defines amoebic dysentery, "a colitis caused by amoeba dysenteriae," and says, "they can be grown in cultures from the stools, but not readily alone, a symbiotic organism being required." He calls attention to a most important fact in pathology of intestinal ulcers, "There is a remarkable tendency to extend by undermining the mucous membrane with the formation of deep serpiginous ulcerating tracts of fistula."

While the review of the literature for the past ten years appears a criticism, the progress has been rapid and the ultimate results satisfactory. The evolution of all our great modern inventions has been long drawn out and we are glad to draw comparison. While Sir Isaac Newton by being struck on the head by a falling apple discovered the law of gravitation; he made the ludicrous mistake of building a steam vehicle which the exhaust in the rear in opposition to the air should propel. This was about 100 years before Watt invented an efficient steam engine. Hero, however, 200 years before Watt was borne, accurately described two kinds of steam engines. In 1784, twenty years after Watt began to use his low pressure engine in Birmingham, he regarding high pressure as criminal recklessness, an efficient and intelligent

workman in Watt's employ by working at night, produced a working model of a high pressure engine, which he operated on the highway after dark. On one occasion, the third time, Murdock's engine lumbering along the road, spouting sparks and giving other signs of diabolism; he was met by a pious parson who, in the indistinctness of the night, seeing the blazing eye and hearing the snorting; felt convulsed in soul at what he was certain must be the devil seeking whom he might devour; with shrieks and yells the affrighted parson took to the woods to arouse his neighbors and exhort them to flee from the wrath that was at hand.

When alchemy developed into chemistry, when physics became an experimental science, when Leibnitz and Newton elaborated the infinitesimal calculus, when Fulton built the steamboat, when Stevenson devised the locomotive, and finally, when Seimens and Gramm produced the electric motor; they were all only working models full of defects.

Symptoms—In the acute form are more severe than ordinary dysentery, but is not usually recognized until it becomes chronic, and even then they are so varied that most of the classic text book symptoms will fail to be present in many cases. Every case of chronic dysentery in which there is mucous and blood should be examined for amoeba dysenteriae. Emaciation with too frequent bowel action should also be examined, for it is in this class of cases that the microscope alone will clear up the case and prove an early diagnosis; the ulceration frequently being out of reach of the proctoscope. Sufficient mucous and necrotic debris may be found in formed stools for microscopic diagnosis. This is the class of cases to which I wish to call especial attention, the more pronounced cases usually are clear. Pain and tenesmus are not constant symptoms, but the presence of mucous is constant. Disappearance of the amoeba after treatment, regaining the normal weight and normal bowel action, tends to confirm the diagnosis, even if in doubt as to the character of amoeba found.

The method I have used in maintaining a constantly warm stage is original, it gives ample time to study the amoeba. A reflected light is placed very close to the stage so that

the heat as well as the light is utilized. The stage is warmed and then the patient required to furnish specimen, a stool in warm water. The viscid mucous can then be picked up with tissue forceps and examined with the one-twelfth oil immersion lense.

I believe I am sustained by the findings of Councilman, Lafleur, Craig and Jergans, and others, that the amoeba dysenteriae is not found in the stools of healthy persons, or rather if found, they will not long remain healthy. I think no one claims so.

Treatment—After various and numerous attempts by many methods and remedial agents, including enemas of silver nit, formalin, quinine, Argyrol in \$1.00 doses, and thinking many times I had at least succeeded, only to find my mistake, in a case of fifteen years' infection; I finally was converted to the "ipecae specific" idea, but alas, disappointed. However, I have obtained so much better results from ipecac than anything else, I combined with it the Kerosene oil treatment, which Dr. Haines, of Louisville, had just reported in the A. M. A. Journal, about three years ago. I do not know what the coal oil alone will do, but I do know that the combined treatment has cured about a dozen cases I have observed; only five or six my own. By prescribing kerosene the refined oil should be dispensed, but the commercial oil will do. Fortunately the enema is not painful nor irritating to the mucosa, but will blister the skin. Less than half gallon will not fill the colon. This is probably sufficiently penetrating to reach all parts of the undermined ulcers and fistulous tracts connecting them. There must be at least a slow absorption, it being perceptible in the taste.

By giving the ipecac in enteric coated pills, 5 gr, the patient complains little of nausea, though thirty grains are given twice a day and daily increased, patient lying on right side and drinking large quantity of water they soon pass out of the stomach before being dissolved. While the systemic effort of ipecac is well understood it produces a diapedesis in the congested mucosa as shown by the tarry stools. It is antiparasitic to the amoeba. This action, however, does not appear feasible by the hypodermic use of emetine. Paul and

Cownley confines the name emetine to the amorphous alkaloid and states that it is properly methyl-ecpheline, the crystalizable alkaloid being named ecphaeline. Many of our recent text books claim it is too irritating for hypodermic use and has a solvent action on the red corpuscles when injected into a vein. I will leave this for discussion.

To recognize, to prevent, to protect, to heal, is as ever, the duty of the internist in this as in other maladies.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Agglutinating Sera for Diagnostic Purposes.—These are the sera of animals (horses) immunized against various bacteria. For use a solution is added to a suspension of the bacterium to be tested, and after incubation for a certain period the mixture is examined.

Agglutinating Serum for the Identification of *Bacillus Paratyphosus A*.—Intended for use by the macroscopic method. H. K. Mulford Co., Philadelphia, Pa.

Agglutinating Serum for the Identification of *Bacillus Paratyphosus A*.—Intended for use by the macroscopic method. H. K. Mulford Co., Philadelphia, Pa.

Agglutinating Serum for the Identification of *Bacillus Typhosus*.—Intended for use by the macroscopic method. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., November 1, 1913, p. 1630.)

Antistreptococcic Vaccine (Scarlatina Prophylactic).—For description of Streptococcus Vaccine, (see N. N. R., 1913, p. 226.) The Abbott Alkaloidal Co., Chicago.

Strepto-Bacterin (Scarlatina Bacterin) Polyvalent.—For description of Streptococcus Vaccine, see N. N. R., 1913, p. 226. The Abbott Alkaloidal Co., Chicago, Ill. (Jour. A. M. A., November 15, 1913, p. 1811.)

Silk Peptone "Hoechst."—Peptone made from silk and standardized to a uniform rotatory power. It is used for the detection

of peoptolytic ferments, either by changes in optical activity or by the precipitation of tyrosin produced by its digestion. Farbwerke Hoechst Co., New York (Jour. A. M. A., November 15, 1913, p. 1811.)

Acne Baeterin Polyvalent.—For description of Acne Vaccine, see N. N. R., 1913, p. 221. Abbott Alkaloidal Co., Chicago.

Coli-Baeterin Polyvalent.—For description of Bacillus Coli Vaccine, see N. N. R., 1913, p. 221. Abbott Alkaloidal Co., Chicago.

Friedlander Baeterin Polyvalent.—For description of Friedlander Vaccine, see N. N. R., 1913, p. 222. Abbott Alkaloidal Co., Chicago.

Gonococcus-Baeterin Polyvalent.—For description of Gonococcus Vaccine, see N. N. R., 1913, p. 223. Abbott Alkaloidal Co., Chicago.

Pneumo-Baeterin Polyvalent.—For description of Pneumococcus Vaccine, see N. N. R., 1913, p. 224. Abbott Alkaloidal Co., Chicago.

Staphylo-Acne-Baeterin Polyvalent.—For description of mixed vaccines, see N. N. R., 1913, p. 223. Abbott Alkaloidal Co., Chicago.

Staphylo-Albus-Baeterin Polyvalent.—Abbott Alkaloidal Co., Chicago.

Staphylo-Aureus-Baeterin Polyvalent.—Abbott Alkaloidal Co., Chicago.

Staphylo-Bacterins (Human) Albus-Aureus-Citrus.—For description of Staphylococcus Vaccines, see N. N. R., 1913, p. 225. Abbott Alkaloidal Co., Chicago.

Strepto-Baeterin (Scarlatina Baeterin) Polyvalent.—Abbott Alkaloidal Co., Chicago.

Antistreptococcic Vaccine (Scarlatina Prophylactic).—Abbott Alkaloidal Co., Chicago.

Strepto-Baeterin (Human) Polyvalent.—For description of Streptococcus Vaccines, see N. N. R., 1913, p. 226. Abbott Alkaloidal Co., Chicago.

Typho-Baeterin Polyvalent.—Abbott Alkaloidal Co., Chicago.

Typhoid Prophylactic.—For description of Typhoid Vaccine, see N. N. R., 1913, p. 227. Abbott Alkaloidal Co., Chicago, (Jour. A. M. A., November 22, 1913, p. 1900.)

Arheol.—Arheol is santalol, the chief constituent of sandal wood. Its action is the same as that of sandalwood oil, but is claimed not to cause disturbances of the stomach or the

kidneys. Arheol is marketed only in the form of Arheol Capsules, 0.2 Gm. Alexandre Astier, Paris, France, (Jour. A. M. A., November 22, 1913, p. 1900.)

PROPAGANDA FOR REFORM.

Deafness-Cure Frauds.—The name of the deafness cure quack is legion. Some carry an alleged cure for deafness as a "side-line," some sell on the mail-order plan their worthless "course of treatment," while still others, and these probably are in the majority, dispose of, at an exorbitant price, devices that are trivial, worthless and often dangerous. The following are some "deafness-cure" concerns: Dr. L. C. Grains Company (formerly Dr. Guy Clifford Powell), Chicago; Dr. Edward E. Gardnes, New York City; George P. Way, Detroit, Mich., and George H. Wilson, Louisville, Ky., (Jour. A. M. A., November 1, 1913, p. 1645.)

The Friedmann Cure.—After studying the cases inoculated by Dr. Friedmann at Montreal, Ottawa, Toronto and London, Ontario, a committee of the Canadian Association for the Prevention of Tuberculosis, has reported unfavorably on the treatment, (Jour. A. M. A., November 1, 1913, p. 1648.)

Trypsogen.—Besides exploiting a clay poultice, "Antithermoline," the G. W. Carnick Company appears to be chiefly concerned in the promotion of "internal secretion" specialties. Thus it markets the diabetes remedy, "Trypsogen" tablets, said to contain "the enzyme of the islands of Langerhans with the tryptic and amylolytic ferments of the pancreas" along with gold bromid and arsenic bromid; Secretogen Elixir, said to be "prepared from gastric secretin obtained from the pyloric antrum and pancreatic secretin from the duodenum, combined with the enzymes of the peptic glands, and one-twentieth of one per cent HCl;" Secretogen Tablets, said to be "prepared from prosecretin and succus entericus obtained from the epithelial cells of the duodenum, combined with pancreatic extract;" Kinazyme, "a preparation of extract of spleen, reinforced with trypsin, amyllopsin and calcium lactate." While great claims have been made for Trypsogen and while it

has been most widely advertised, it is the opinion of the most eminent students of the question that pancreas is not efficacious in diabetes. Trypsogen should be considered as an unscientific shot-gun mixture. When the Council on Pharmacy and Chemistry paid less attention to the therapeutic worth of a proprietary preparation, both Antithermoline and Trypsogen were admitted to New and Nonofficial Remedies. They were dropped some years ago, when the Council revised its rules, (Jour. A. M. A., November 1, 1913, p. 1649.)

Radio-Active Waters.—All naturally occurring waters, even rain water, are somewhat radio-active. While the waters of Hot Springs, Ark., have been investigated by the Department of the Interior, this information had been suppressed "for administrative reasons." It is stated only that the waters are "radio-active to a marked degree," a statement which might have emanated from a patent medicine manufacturer, (Jour. A. M. A., November 1, 1913, p. 1649.)

"Therapeutic" Names.—Claiming that physicians demand that they be supplied with "a pill for every ill" most pharmaceutical houses supply "Pills Gonorrhea," "Pills Spermatorrhea," "Pills Leukorrhea," "Pills Dysmenorrhea," etc. Therapeutically suggestive names for medicine led to thoughtless use by physicians and to counter-prescribing by druggists. That the use of therapeutic titles is not an economic necessity is illustrated by the fact that E. R. Squibb & Sons are discarding such titles, (Jour. A. M. A., November 1, 1913, p. 1650.)

Mouth Washes.—Recent investigations seem to show that adherence of mucin caused decay of the teeth. So-called antiseptic mouth washes and alkaline washes do not remove this mucin and therefore do not prevent decay of the teeth. The vegetable acids, such as fruit juices and diluted vinegar, are the most successful agents for the removal of mucin, (Jour. A. M. A., November 8, 1913, p. 1718.)

Pennyroyal, Tansy and other "Emmenagogue Oils."—An examination of the oils of pennyroyal, tansy, savin, rue, thyme, turpentine and of apiol proves that they have no

specific or directly stimulating action whatever on the uterine muscles; on the contrary they prohibit the contraction of the uterus and even paralyze it. If these oils exhibit any emmenagogue or abortifacient action whatever, it is due to a general constitutional poisoning or gastro-intestinal irritation and not to any specific action in accord with the intent for which they are sometimes administered, (Jour. A. M. A., November 8, 1913, p. 1725.)

Mouth Washes.—Such polypharmacy as is represented by the complex solutions, official and proprietary, used as mouth washes is nonsense. In them the value of useful ingredients is obscured by the useless shrubbery which surrounds them. A dash of this and a dash of that in these mouth washes or gargles is simply playing to the galleries, (Jour. A. M. A., November 15, 1913, p. 1812.)

The Action of Atophan.—It has been recognized that the administration of Atophan increased the elimination of uric acid and that there was a possibility that a greater production of uric acid is induced by the drug—a result which would scarcely encourage its use in therapy. Recent investigations, however, favor the view that the drug merely stimulates the kidneys to abstract from the blood a greater quantity of the purin end-product than it normally would, (Jour. A. M. A., November 15, 1913, p. 1818.)

Baughn's Pellagra Remedy.—A booklet issued for Baughn's Pellagra Remedy, American Compounding Co., Jasper, Ala., suggests symptoms of all kinds as an indication of pellagra. If you have any of these, the inference is that the "grim specter," pellagra, has you in its grasp! Horror is piled on horror in the most approved "patent medicine" style, reaching as a grand climax a description of "the last stages" and closing with the peroration: "And the last stage, till now—the mad house and death." As the exploitation of this nostrum interfered with the attempts of health officers to eradicate pellagra in Alabama, it was analyzed in the A. M. A. Chemical Laboratory. The nostrum comes in two forms, capsules and a powder for external use. The capsules were found to contain charcoal, basic iron sulphate and a little

quinine. The powder was composed of common salt and basic iron sulphate, (Jour. A. M. A., November 15, 1913, p. 1828.)

Regulin.—Regulin is agar-agar (N. N. R., 1913, p. 20) to which some cascara preparation has been added. The product at one time was described in the Appendix to New and Nonofficial Remedies as follows: A mixture of agar-agar in a dry form with extract of cascara sagrada representing 15 per cent of an aqueous fluid extract of cascara sagrada, (Jour. A. M. A., November 15, 1913, p. 1832.)

Waterbury's Compound.—Waterbury's Compound—called Waterbury's Metabolized Cod-Liver Oil Compound until the A. M. A. Chemical Laboratory showed it contained practically no cod-liver oil—was one of the proprietary preparations advertised both in "display" form and also in the form of an "original article," in the **Army and Navy Medical Record**—a fraudulent publication that offered its editorial pages for sale. Physicians are now receiving from the Waterbury Chemical Company, a reprint of what purports to be an editorial from the **Army and Navy Medical Record** entitled, "One of America's Most Valuable Preparations." The preparation, of course, is "Waterbury's Compound." (Jour. A. M. A., Nov. 15, 1913, p. 1830.)

Sensitized Virus-Vaccine.—Besredka asserts that the injection of living germs sensitized in certain ways produces a more substantial immunity and greater production of antibodies than the injection of germs killed by heat or other ways. In apes sensitized typhoid bacilli gave absolute protection, causing no fever and no reaction, while killed bacilli failed to protect adequately. As a result of these experiments a number of "sensitized virus-vaccines" have been prepared and the anti-rabic vaccine used in France is now a sensitized virus. Before the employment of the sensitized typhoid virus-vaccine can be considered, much evidence must be produced that there is no danger of producing typhoid carriers and that this vaccine gives any better protection than the vaccines now in use. Similar objections hold against other vaccines of this kind and at present the obstacle to the use of such living germs for protective purposes would seem to be quite impassable,

(Jour. A. M. A., November 15, 1913, p. 1814.)

Berledets.—This is an anti-fat remedy sold under the claim that dieting and exercise are unnecessary, but the directions for which recommends moderation in diet and free exercise. Examination in the A. M. A. Chemical Laboratory showed the nostrum to consist of tablets, each containing about 9 grains boric acid, along with corn starch and milk sugar. It is evident that Berledets will cure obesity only by seriously interfering with digestion, (Jour. A. M. A., November 22, 1913, p. 1917.)

The Morley Ear-Phone.—The Morley Invisible Ear-Phone, Morley Company, Philadelphia, Pa., is nothing more or less than the old, well-known Toynbee artificial drum-head. It consists of a circular piece of oiled silk about one-quarter inch in diameter, through the center of which a piece of silk thread has been passed, for the purpose of holding the oiled silk in position. A small piece of flexible tubing comes with it to aid in inserting the device in the ear. The indiscriminate sale of a device of this sort, especially at exorbitant prices and under fraudulent claims, is not merely, an injury to the purse, but a distinct menace to the health of the deaf, (Jour. A. M. A., November 22, 1913, p. 1919.)

Veroform Germicide Omitted from N. N. R.—Veroform Germicide is described in New and Nonofficial Remedies, 1913. It is a formaldehyde soap solution, containing 20 per cent of formaldehyde. The report of the U. S. Public Health Service on commercial disinfectants having shown Veroform Germicide to have a phenol co-efficient of but 0.43, the manufacturers of the preparation were asked to present evidence to justify the term "germicide" in the name and the claim that it has more bactericidal effect than phenol. As the Veroform Co. produced no evidence to substantiate the questioned claims, the Council on Pharmacy and Chemistry voted to omit the preparation from New and Nonofficial Remedies, (Jour. A. M. A., November 22, 1913, p. 1920.)

Pulmonol.—Pulmonol is a consumption "cure" put out by the Pulmonol Chemical Co., New York. As always in the case of consumption "cures," the testimonials issued may be divided into two classes, those who really

had tuberculosis and those who did not have it. Investigation of some of the testimonials given some time ago, generally show that those who relied on the nostrum are dead, while those who got well never had tuberculosis. Examination in the A. M. A. Chemical Laboratory indicated that each fluid ounce of Pulmonol was approximately equivalent to 29 gr. of potassium guaicol sulphonate, 10 gr. of sodium benzoate and 1-24 gr. of strychnine sulphate, (Jour. A. M. A., November 29, 1913. p. 1998.)

Nashville, December 5, 1913.

Dr. Perry Bromberg, Secretary,

Nashville, Tenn.

Dear Doctor: I am enclosing you copy of the Tennessee Anti-Narcotics Law, which you will see very directly concerns the practice of every physician in the State, and I call your attention to Section 1-a and 1-b, and likewise Section 2. You will note that physicians can only distribute opium and coca compounds in the course of professional practice and this rule must be strictly adhered to, as must the further requirement that the physician must personally attend the patient. You will note further that in order for the pharmacist to comply with the law, he must keep on file a copy of all prescriptions containing such drugs filled by him. This will make it necessary for the physician to send in a prescription, of course, and therefore the physician should avoid telephoning to the pharmacist any prescription containing a compound of opium or coca. Note further that physicians must likewise keep a duplicate of prescriptions calling for such drugs, which duplicates are subject to inspection by any of the officials of this department.

Note that the interest of the physician and every other man handling the drugs is fully guarded by Section 7, making it a misdemeanor to disclose any of the information

contained in the registries or other records provided for by the Act.

The rules and regulations for the enforcement of this Act are now in course of preparation and will be promulgated as soon as they can be prepared and published as soon as possible. They will be sent to all physicians and pharmacists of the State, so far as we can get their names from existing registers, but in order to insure the receipt of same, all persons desiring them should inform this department, which, by the law, is charged with the enforcement of the Act.

It further seems desirable to call the attention of the profession to the fact that this law is designed to correct the great abuses now existing in the use of such materials, by following down each lot of material which comes into the State, ascertaining what the person receiving same does with it, and whether any of it is sold in violation of law. In this respect it is in its provisions parallel with the so-called Harrison Act, which has passed the lower house of Congress and will probably pass the Senate either in its present or a modified form. With the passage of this Harrison Act, there will be no trouble whatever in strictly enforcing the Tennessee law as regarding both classes of these compounds, as we will then be able to trace every batch of the goods coming into the State from the outside. Even at present we are able to effect this with the cocaine compound by means of a Treasury decision which enables keeping track of those lots of cocaine coming into the State.

I should greatly appreciate the publication of these facts in your Journal in order that the profession may be properly informed regarding this important law.

Very truly yours,

LUCIUS P. BROWN,

Commissioner.

THE JOURNAL

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EDITORIALS**"LUKE, THE BELOVED PHYSICIAN."**

The editorial herewith reproduced was published originally on Palm Sunday, March 22nd, 1902, in the Lexington Herald, and reproduced in that paper on the occasion of the meeting of the Southern Medical Association in November. It was written by Col. Breckinridge, and as an expression from a layman is well worth reading.

"LUKE, THE BELOVED PHYSICIAN."

The greatest of logicians and one of the greatest of men, whose courage was divine and whose tenderness was equal to his courage, rarely used words of praise or even of affection, but he opened the door of his heart, and revealed in part the sweetness and tenderness of that superb and God-like heart, when he wrote "Luke, the Beloved Physician." No painter ever portrayed a character, no artist ever drew a portrait more life-like and perfect than that drawn by this deft and inspired apostle when he summed up the life, the qualities, the success, the loveliness, of Luke in the pregnant, weighty, loving phrase, "the beloved physician." It brings back memories of sufferings alleviated, of pain driven from the writhing body, of sickness conquered, of death routed; it recalls the skill and gentleness, the power and sweetness, the fidelity and learning, the courage and devotion which made the physician so dear and moved the very days of anxiety and dread and suffering into days of friendship and of gratitude. How honorable, how patient, how skillful, how faithful, how loyal, is that physician who secures the confidence, the esteem, the affection of the families into which he is called. To him have been confided all domestic secrets, all personal and social confidences; to him we trust all we love, free access to the sacred chambers of the loved, absolute freedom in the very holy of holies in our hearts and homes.

No one has committed to him such trust,

wider confidence, such secrets; and if he is beloved it is a conclusive testimony to his honor and nobility. Upon his skill, his learning, his capacity, his fidelity, depends the safety of all we love, and with full confidence we place in his hands their lives.

Who can estimate the labors; who measure the toil, who calculate the sacrifices of comfort and rest and strength demanded of a physician in full practice? All hours are given to toil; night and day, in the burning heat of the torrid summer and amid the sleet and snow of arctic winter, he asks no rest and shrinks from no exposure. There is no vacation, no rest, no time for relaxation, if a patient needs him. It is the hardest of lives. And yet it is crowded with incalculable joys and full of inestimable triumphs. To relieve horrible pain, to restore dying child to heart-broken mother, to preserve the invaluable life of father or mother, to rescue from an untimely grave the stay and support of a helpless family; what can equal the joy, what surpass the delight which must so often come into the life of the beloved physician?

It is a noble profession, a glorious calling, a splendid life, if indeed it be worthily lived.

And we in Lexington have been so often and so splendidly blessed in those who have honored that lofty calling. From our earliest history our physicians have been models of manhood, of skill, of honor, of gentle manner and courageous character. The lives and labors and toils of our physicians are a large part of our superb history.

Among all the physicians who have thus honored Lexington our friend, "the beloved physician" who passed from the services of his suffering brethren to the reward of his Master was full peer—never surpassed as gentleman, as tender, kindly, loyal, faithful, skillful physician.

His professional brethren are proud to declare that he was chief among them—one after whom the young physicians might well model themselves, one to be imitated and followed.

We knew him since our early childhood; we cannot recall when we did not know him. In every relation of life, in every possible condition in such a community, he was well known. Everyone in this city knew him and knew of him. His life was an open book, without secrets; in his closet were no skeletons of his doing.

He was as modest as he was beloved and as simple as he was pure. Kindness ever flowed from his tongue and adorned his daily life. During a half century of acquaintance we cannot recall a harsh word, an unkind sentence or an unfriendly act to any human

being; yet he was a frank, sincere and open man in all the times during which he lived and acted.

We care not to relate or schedule the mere details of his life, his birth, his marriage, the positions of honor he held, these are told in other columns by others; what we would fain do, were it in our power, is to recall the man himself, the physician as he was among us. Such a life, lived for so many years, devoted to such a calling with such success and in so many families, is of incalculable value to the community. The greatest wealth of any community is the possession of such citizens, the services of such professional men, the lives of such gentlemen, who are thrown in intimate contact with so many.

After a night of darkness, when during the long hours the lightning has flashed through the windows and the storm has beaten against the roof, when one has tossed in pain and longed for the day to break, and at last the indistinct light of the rising sun seeks entrance and finds it and the eye discovers it and hope revives, fear flees, strength returns and the heart grows brave; so in the dark room where pain and fear unite to depress and sadden, comes the beloved physician and brings with him surcease of suffering, pain takes flight, fear retires to the hidden recesses of the heart, and hope once more gives courage. On this blessed Palm Sunday, which commemorates the triumphal entry of The Great Physician into the streets of the Holy City—when before him were palm branches strewn and to heaven rose the Hosannas of the following, applauding crowd, who cannot recall the gratitude and love which filled his heart to some "beloved physician;" and such an one can realize the sense of loss, the sorrow, the distress, and yet the love and gratitude, which this day are felt in many hearts because Henry Martyn Skillman stepped from the bedside of the sick to the foot of the throne of the Great Physician.

THE SOUTHERN MEDICAL ASSOCIATION.

The necessity for such an organization was seriously questioned a few years ago, when a few of our prominent Southern educators first organized and started on its career this medical association. Like everything else in life, those things which have no purpose to fulfill will atrophy and die, while those that are active grow strong and develop. This association, by virtue of its growth from 300 members to 2,000 in three years, gives the

strongest possible evidence of its needs, and its power to fulfill them seems to be assured.

The recent meeting at Lexington, Ky., was well attended; the papers and discussions were of the highest type, and all who attended were unanimous in their praise. One was particularly struck with the absence of politics, which we trust may never be permitted to creep in.

The Lexington profession gave the visitors a royal welcome, and everything possible was done to contribute to their comfort during the meeting.

News Notes and Comment

Dr. E. C. Ellett, of Memphis, has returned from a trip abroad.

Dr. D. B. Cliffe, of Franklin, Tenn., was in Nashville recently with his wife, who was ill at a local infirmary.

Dr. Willard Steele, of Chattanooga, was recently confined at St. Thomas Hospital, Nashville, where he had a slight operation.

Dr. A. B. Cooke, of Nashville, who is spending the winter in California, made a short visit to his former home and friends early in November.

Dr. Herman Spitz announces the opening of his Bacteriological and Pathological Laboratory. Dr. Spitz is located at 308-311 Eve Building, Nashville, Tenn.

Dr. W. W. Mitchell, of Memphis, Tenn., has returned from an extended trip abroad, two months of which time he spent in the study of Pediatrics in the clinics of Paris.

Drs. Haggard and Bureh, of Nashville, attended the Tri-State Meeting in Memphis on November 10th, going from Memphis to Chicago to attend the Clinical Congress.

Dr. Elizabeth Kane, of Memphis, delivered an instructive and interesting address on the subject of Sex Hygiene to a large audience

in the High School auditorium at Nashville, November 3rd.

Dr. F. B. Reagor, of Shelbyville, attended the Clinical Congress of Surgeons at Chicago, November 10th to the 15th, returning via Lexington, Ky., where he attended the Southern Medical Association.

At the seventh annual meeting of the Southern Medical Association held in Lexington, Ky., November 17-20, Dr. Stuart McGuire of Richmond, Va., was elected President. The next meeting will be held in November, 1914, at Richmond, Va.

At the recent meeting of the Southern Medical Association, held at Lexington, Ky., the first organization of Southern Medical Women was accomplished. It is purposed to be an auxiliary to and meet in conjunction with the Southern Medical Association. Dr. Lillian South, of Bowling Green, Ky., was elected as the First President, and Dr. Rose Grentt of Spartanburg, S. C., Secretary-Treasurer.

At the recent meeting of the Clinical Congress of Surgeons of North America held in Chicago, November 10-15, Dr. John B. Murphy, of Chicago, was elected President, Dr. George E. Armstrong, of Montreal, Vice President. General Secretary Franklin H. Martin of Chicago, General Treasurer Allan B. Kanavel of Chicago, and General Manager A. D. Ballou of Chicago were re-elected. A committee representing the Surgeons of London, England, composed of Sir Rickman Godlee, Sir W. Arbuthnot Lane, and Mr. Herbert Patterson, extended an invitation to the Clinical Congress to hold its next session in London in July. The invitation was unanimously accepted.

On November 20th and 21st the Middle Tennessee Medical Association were guests of the Columbia members of the fraternity in the regular semi-annual meeting. This was the thirty-ninth meeting, and there was a larger attendance than usual. The local Committee on Arrangements was composed of Dr. R. S. Perry, Chairman, Bigbyville; Dr. L. E.

Ragsdale, Williamsport; Dr. P. D. Biddle, Dr. O. J. Porter, and Dr. J. G. Williamson, Jr., of Columbia. There were forty subjects on the program, aside from two or three special topics. "School Hygiene" and "Flies and Things" were two of these specials.

Physicians were in attendance from Nashville, Franklin, Fayetteville, Lewisburg, Murfreesboro, Pulaski, Gallatin, Lebanon, Bell Buckle, Shelbyville, Lynchburg, McMinnville and many other points in Middle Tennessee. The newly-elected officers of the Association are Dr. C. H. Hatcher, President, Nashville; Dr. O. J. Porter, Vice President, Columbia, and Dr. R. W. Billington, Secretary-Treasurer, Nashville. The next meeting will be held in Bell Buckle.

The Herman Knapp Memorial Eye Hospital has opened its doors in its new location at the southwest corner of 57th Street and Tenth Avenue, New York.

The hospital was founded in 1869 by the late Dr. Herman Knapp, and under the name of the "New York Ophthalmic and Aural Institute," it has been in uninterrupted activity at 44 and 46 East 12th Street. During these forty-four years over 430,000 patients have been treated. The new building is a specially constructed seven-story fireproof hospital building, with complete modern equipment for the treatment and study of diseases of the eye.

The Board of Trustees has deemed the occasion of its removal to a new building in a new location the proper time to change the name of the institute in honor of its distinguished founder.

According to a report prepared by Dr. William Litterer on bacteriological analysis of samples of water collected on November 18th, the per cent of bacterial elimination from the reservoir at room temperature was 96.7, and the per cent of bacterial removal from hydrant sample at room temperature 98. In a report of bacteriological analyses of samples of water collected on November 15, last year, Dr. Litterer stated that the per cent of bacterial elimination from the reservoir was 97.2 and that the per cent of bacterial removal

from hydrant sample was 98.4. It is therefore believed that the water supply of the city was being about as effectively purified on November 18th, this year, as on November 15th, last year. The reservoir sample secured on November 15th, last year, had a bacterial count of room temperature 42; the reservoir sample secured on November 18th, this year, had a bacterial count at room temperature of 100; hydrant sample last year, 24; hydrant sample this year, 60.

Dr. C. A. Bailey, assistant surgeon of the United States public health service, was in Nashville November 5th to confer with Dr. R. Q. Lilliard and Dr. R. H. Shoulders, of the State Board of Health, in regard to the prevalence of granulated eyelid disease, or trachoma, in East Tennessee. The disease is regarded as especially worth watching in the extreme upper counties of East Tennessee. The investigation is regarded by physicians as one of the most important ever undertaken by the department. It is being made with the co-operation of State Superintendent of Public Instruction S. H. Thompson, as the disease affects the public schools more than any other organization. The movement will doubtless receive the support of both schools and municipal officials. After the East Tennessee investigation, Dr. Bailey will probably begin his work in Middle and West Tennessee, where the disease is not so dangerous as in the eastern part of the state.

MARRIAGES.

Announcements have been received from Dr. and Mrs. J. A. Ashford of the marriage of their daughter, Gertrude, to Dr. Walter Richard Wallace, which took place November 3rd at Vicksburg, Miss.

Mrs. Robert Caldwell Bogle announces the marriage of her daughter, Vanee, to Dr. Oval Nelson Bryan, Wednesday, November 5th, 1913, Nashville, Tenn.

The marriage of Dr. David Richard Pickens and Miss Corinne Wadley was brilliantly celebrated Tuesday evening, November 18th, at the First Presbyterian Church. Dr. and Mrs.

Pickens left on a short bridal trip and will be at home to their friends after December 1st in the Seminole Apartments.

Mr. and Mrs. William H. Blair, of Leach, Tenn., have issued invitations to the marriage of their daughter, Mabel, to Dr. Lewis R. Anderson, of Granville, Tenn., to take place December 17th. The marriage will be at the home of the bride's uncle, Mr. M. G. Blair, in Huntingdon. Miss Blair is one of Carroll County's successful young school teachers, and the groom a leading physician at Granville.

DEATHS.

Dr. J. H. Snoddy, a prominent citizen of Martin, Tenn., died at his home November 12th, after a short illness. Dr. Snoddy years ago lived at McKenzie, Tenn., and went from there to Illinois, moving back to Martin, Tenn., about a year ago. He was a member of the Missionary Baptist Church of Martin. Dr. Snoddy was 65 years old and leaves six children. His remains were carried to Lebanon, Tenn.

Dr. J. W. Poston, one of the oldest and most prominent citizens of Crockett County, died November 6th. Dr. Poston was born in what is now known as Crockett County, July 20th, 1850. His preliminary education was received in his own county. Later he entered Nashville Medical University and afterwards the Medical Eclectic Institute of Cincinnati, where he graduated in 1873. After taking a post-graduate course in Memphis, he located in Maury City, where he practiced his profession for many years. Dr. Poston was a brother of Hon. W. F. Poston, of Alamo, a well known lawyer and politician.

It is with much regret that we report the death of Mrs. C. T. Burnett, wife of Dr. C. T. Burnett, who died November 18th, after a short illness from double pneumonia.

The body of Dr. J. T. Crawford, who died Monday, November 24th, at Los Angeles, Cal., were removed to Gallatin, Tenn., and buried in an old cemetery where many of

Mrs. Crawford's family have been laid to rest. Dr. Crawford formerly lived in Memphis. He was prominently associated in his profession there, being a pioneer in abdominal surgery. He left Memphis several years ago on account of failing health.

Mrs. J. R. Stevens, wife of Dr. Stevens, of Del Rio, died Sunday, November 23rd, after a long illness with tuberculosis.

County Society Proceedings

WASHINGTON COUNTY.

The Johnson City and Washington County Medical Society met in its regular monthly meeting upon Thursday night, October 2, 1913. The following members being present: Drs. Matthews, H. D. Miller, Long, Sells, H. D. Cass, Randall and Cox. Reading and approval of minutes of former meeting. Clinical talks on the reflexes in asthmatics came up for lengthy discussions, several cases were reported in individuals who had suffered with paroxysms of asthma for years who were relieved by relieving and removing sensitive areas in the nasal passages. It was apparent that the consensus of opinion of those present that a large number of asthmatics were relieved by this procedure, but not all. However, the percentage was large who are relieved by well directed work upon the nares.

The serum treatment, and especially of antitoxin in diphtheria, came up for a lengthy discussion on dosage and time of administration. It was held by those discussing the feature, that if it was known the units of toxins present in a diphtheritic case the unit number of antitoxine would be sufficient, but this not being possible, then it was thought to give large doses (as there was no injury by them) early in the disease. It was held by some members that the early administration and repetition in the first twelve hours was good treatment and that a delay in repeating brought about the multiplication of toxins and that the antitoxine has no power of same, and hence great doses of 50 and 80 thousand units gave no result. The reason adduced was the repetition was too long withheld.

Drs. H. M. Cass and Estes were elected to membership, the former by card.

Dr. Broyles essayest for November meeting. The Society adjourned.

The Johnson City and Washington County Medical Society met in its regular monthly meeting, Dr. H. B. Miller, President, presiding. The following members being present: Drs. E. A. Long, Sells, Kennedy, Broyles, Randall, Cass, Estes and Cox, of Johnson City; Dr. Sherrell, colored, visiting; Dr. Dulaney of Jonesboro.

After the reading and approval of the minutes of the former session, clinical reports were called. Dr. Long reported an interesting case of post-partum hemorrhage, and upon the suddenness of the hemorrhage came near losing woman, but after removing clots and bimanual compression and presence of hand in womb and the administration of a normal salt enema, strichnia, etc., the case made a speedy recovery. The doctor laid especial stress upon the necessity of preparedness of the obstetrician when in attendance upon a case of confinement, and it was brought out in the discussion the necessity of having fountain syringe, hypodermies, and known remedies in the treatment of this alarming and dangerous condition. Dr. Matthews reported a case of face presentation in a little, short woman, and but for the reason that she had had former labors and roomy pelvis, a serious condition faced him after not being able to make out the presentation; however, the case did well. Dr. Dulaney called the attention of the Society of a case of eclampsia without the presence of albumen in the urine, and it was developed in the discussion that a condition of this kind could and did occur by reason of other toxic ingredients, or waste materials. Dr. Sells reported a case of eclampsia, which after investigation, was a cause of hysteria, and the case afterwards was delivered without any trouble. Dr. Sherrell, colored, visiting, was called upon and related his experience with what appeared to be a case of pyemia in a lad of thirteen years, who had with a very high temperature, a great number of abscesses and which continued for two months and finally the lad succumbed. It was thought

to be a case of heredity syphilis. Dr. Broyles essayist for December meeting. Subject, "Tracoma." Election of officers comes up at next meeting in December. Come out and help us choose.

H. D. MILLER, President.
J. W. COX, Secretary.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met at the office of Dr. E. H. Jones, in Murfreesboro, November 5, 1913.

The meeting was called to order at two o'clock by the President, Dr. B. N. White.

Dr. M. B. Murfree read an essay on "Placenta Previa," which was discussed among the members present. This paper was requested for publication in the Journal.

Members present: Drs. E. H. Jones, E. M. Holmes, E. O. Jenkins, Rufus Pitts, W. C. Bilbro, J. A. Scott, M. B. Murfree, B. N. White, A. J. Jamison and R. W. Read.

RUFUS PITTS, M.D., Secretary.

GRUNDY COUNTY.

Following its usual custom of meeting at different places in the county, the Grundy County Medical Society met at Pelham, Tenn., at its last regular meeting, with President Bryan in the Chair. This innovation of the Society in meeting at various places in the county so as not to make it so inconvenient to the physicians residing away from its regular meeting place seems to be a decided success. Dr. A. B. Bowden, of Pelham, was elected a member of the Society and given the right hand of fellowship, as this completed the organization of the county, every physician in the county in active practice now being a member. Following the regular order of business a somewhat comprehensive paper was read by Dr. Lockhart on "Vaccines and Vaccine Therapy," which elicited a free discussion and the asking of many very important questions. The chief aim of the paper seemed to be to show the great underlying principles of infection and immunity so that a rational and unprejudiced view of vaccine therapy would be more possible for the general practitioner, showing its uses and abuses, its benefits and dangers so that instead of its empiric

cal use as is now to a greater or less extent the case, it could be used knowingly and understandingly. Among the more interesting questions asked was by Dr. Bryan, he wanting to know why it was that there were comparatively so many vaccines and so few serum treatments on the market? It seemed to be the opinion of the essayist that one of the principle reasons was the comparative ease with which the various vaccines were prepared and the incidental, but not the altogether accidental good showing, of the profit side of the ledger of the many pharmaceutical houses. There being no more business before the Society, adjournment was moved and carried, to meet at Tracy City, Tenn., the first Tuesday in next month.

COCKE COUNTY.

The Cocke County Medical Society met in regular session in the city hall with our President in the Chair, with the following members present: Drs. Bingham, Burnett, Knight, Hampton, Masters, Seay, Smith and A. J. Neas.

Dr. Masters was the principal speaker of the day, subject being tuberculosis, with reference to the Rogers, Lorimer and the Friedman treatment, and advised that we regard these things with suspicion. He spoke of the impossibility of general practitioners treating tuberculosis, with the unhygienic surroundings, and the lack of control of the patient that he would have to contend with, and said that the only way in which to treat this disease was to isolate the patient in a sanitarium under the direct observation of the one in charge.

Dr. C. E. Barnett was elected to membership.

The Society ordered the President to appoint an essayist for the next meeting. Dr. C. T. Burnett was appointed, selecting for his subject: "The Relation of the Medical Profession to the Public." Drs. Smith, Bingham and Stevens were appointed to discuss the paper.

We regret very much to lose from our meeting the presence of Drs. Holland, Byrd, and Masters, who have left for Florida.

We regret to report that Mrs. Stevens is very sick from tuberculosis, and is not expected to live.

The Cooke County Medical Society met in regular session November 21st in the City Hall, with Dr. J. E. Hampton presiding pro tem. The minutes of the last meeting were read and approved.

Several cases were reported, and a paper read by Dr. Bingham on "Santonin Poisoning." This paper was discussed by Dr. Hampton.

Dr. David Seay reported an interesting case of hysteria in a young girl, 16 years of age, of a neurotic disposition; the attack being brought on by a misunderstanding and disappointment in her lover. She resisted all treatment until the young man was called to see her, when she at once began to improve rapidly.

DAVID SEAY, M.D., Secretary.

DAVIDSON COUNTY.

October 14, 1913.—President West called the regular weekly meeting of the Academy to order at 8:15 p.m., with the following present: Drs. Bromberg, Tarpley, Sumpter, Codden, Hibbett, Dixon, Shoulders, Hargis, R. A. Barr, Sullivan, Leonard, Crawford, DeWitt, Eggstein, Ward, Thach, D. Eve, Sr., Kennon, Brush, Froua, Edwards, Schell, Overton, Aycock, Hatcher, R. Caldwell, Hill, L. Caldwell, Bloomstein, Tigert, Floyd, McGannon, McIlvain, Owsley, H. King, Wilson, Sanders, Pollard, Harris, C. F. Anderson, J. A. Witherpoon, Oughterson, Litterer, McCabe, and visitors.

Dr. R. A. Barr moved, seconded by Dr. Kennon, that the reading of the minutes be dispensed with. Carried.

Dr. Bloomstein presented a patient with the following history: "Robbie G., age four and one-half years. A full term, normal delivery, baby weighing four pounds at birth. He was breast fed for six weeks. Was then put on Malted Milk for one week; then on cow's milk, which it vomited, but seemed to gain weight. It was changed successively to Eskay's Food, Mellin's Food, Malt Soup and Nestle's Food, none of which entirely agreed

with the little patient, though he weighed fifteen pounds when one year old. When fifteen months old it developed a diarrhoea, which lasted three weeks. Since then it has been constipated, the bowels never moving without an enema. Cut its first teeth when sixteen months old. For the past year it has been fed on soft diet, including milk, cereals, gravy, cornbread, potatoes and eggs, never, however, taking more than a few spoonfuls at a time. Present condition, very much emaciated, weighing nine and one-half pounds. Length, twenty-eight and one-half inches. Circumference of the head, sixteen inches. Skin soft and elastic. Has all its teeth, but the upper incisors are rotten to the gums. Heart and lungs negative. Liver normal. Spleen not felt. Family history negative. Both parents living and well; one brother six years old, normal and well."

The entire Academy came forward and viewed the child, after which Dr. Wilson discussed the case, saying that he concurred in the diagnosis made by Dr. Bloomstein of marasmus, though this particular case looks more like a lack of nutrition rather than a lack of assimilation. In thinking over the cause, it occurred to Dr. Wilson that an atrophied stomach might be so assigned, but the forced feeding instituted by Dr. Bloomstein in the past few days would eliminate that. The speaker stated that he saw no grounds for a diagnosis of cretinism, which it is alleged was made by a Nashville physician some time since. He thinks the treatment instituted is proper as evidenced by an increase in eight ounces in the past week.

Dr. Bloomstein, closing, stated that he had never seen anything like this case in his experience. At first sight he thought this a fifteen months infant. He believes there is some developmental change in the child, but doesn't know what it is. He believes that the patient has never taken enough food to thrive, though he now takes six ounces daily by gavage. The stools are now normal. For the first time in two years the child has had a bowel movement without an enema.

Dr. King, of Smith County, was accorded the privilege of the floor.

Dr. R. A. Barr explained the ideas of the

Committee on Abstracting Medical Literature had in the plan presented and adopted by the Academy. The Chair announced that the first committee provided for in the plan to be the same as the committee which formulated said plan.

The motion introduced at the previous meeting to abolish the hour of adjournment as provided for in the By-Laws, carried.

Dr. McGannon reported a case of ovarian tumor in a woman of thirty years, in which a diagnosis of typhoid fever had been previously made. At operation a tumor containing about one quart of yellowish purulent fluid with many thick adhesions was found. Practically all of the tumor was removed and drainage instituted.

Dr. Wilson reported an unusual case in a child of two and one-half years, in which, by a series of circumstances, it was impossible at first to differentiate between tubercular or septic meningitis, hydrophobia or poliomyelitis. Finally, the latter proved to be correct.

Dr. DeWitt exhibited a set of needles presented to him by Dr. Charles McKenzie and which are used by Chinese doctors in the treatment of disease. The needles are of metal and are used hot or cold. Dr. DeWitt stated that they are thrust into the body by the Chinese doctors in one or more of the 360 parts into which they sub-divide the body to drive out the evil spirits.

Dr. Hill reported a case of a woman of thirty years, who was running a slight elevation of temperature and who has had two or three attacks of colitis. Although no amoeba were found in the stools, she was given twelve injections of emetin, but with no beneficial effect. He asked if tuberculin would clear up this case.

Dr. Oughterton had seen this case with Dr. Hill and recommended that sub-cutaneous tuberculin should be used and in this way the diagnosis, as far as tuberculosis was concerned, could be cleared up.

Dr. Eggstein, in reply to Dr. Hill's question as to whether this patient could be pregnant, said that this could be determined by Alberhalden's serum diagnosis of pregnancy. Dr. Eggstein then described the technic in detail of this reaction.

Dr. Bloomstein reported a case of nephritis of unknown origin in a child three and one-half years old. The first symptom noted by the parents was swelling about the eyes; the child otherwise being in apparently perfect health. The urine was loaded with albumen, but very few casts. The child was still under observation.

This case, and nephritis in general, was discussed by Drs. Jack Witherspoon, Litterer and Oughterson.

Dr. Tarpley reported a case of a child three and one-half years old, who complained of pain in the foot. There was swelling which reached to the knee. Pulse, 150. Temperature, 105.6. Respiration was of the Cheyne-Stokes' type. Mother died of tuberculosis, the family and personal history otherwise negative. The patient died within four hours from the time first seen. A diagnosis was asked for. Dr. Robert Caldwell suggested acute osteomyelitis. Dr. Ward agreed with Dr. Caldwell's diagnosis. Adjournment was then taken.

October 21.—In the absence of the President and Vice President, the Academy was called to order at 8:10 p. m. by Dr. G. C. Savage. The following were among those present: Drs. Duncan Eve, Sr., Nichol, Hill, Robert Caldwell, Sullivan, Crawford, Shoulters, Schell, Fuqua, Ward, McCabe, Eggstein, Howard King, Billington, Sharp, Sayers, Floyd, Thach, Hargis, Owsley, W. B. Anderson, Hibbett, Leonard, Bloomstein, Harris, Litterer, Kennon, Manier, Hugh Barr, Sanders, Edwards, Spitz, Morrissey, Jack Witherspoon, Larkin Smith, Oughterson, Dixon, Burch and Overton.

Dr. Kennon moved that the reading of the minutes be omitted. Carried.

Dr. Gallagher called attention to the fact that the Program Committee had been unable to obtain sufficient essays to complete the program of the Academy. Attention was called to a section of the Constitution providing for such a contingency, in which the Program Committee had the power to assign subjects to the members. Drs. Savage, Nichol and Duncan Eve, Sr., spoke on this matter, the latter moving that the Program Committee be

instructed to select the subjects and the members to read on same, and that the committee make out a list and mail each member a copy. Carried.

Dr. Duncan Eve, Sr., reported the following case: A lady, age 84 years, fell down several steps, fracturing her left humerus at the surgical neck. Her left side was bruised and the ligaments of her left hip wrenched. The question of fracture of the neck of the left femur was raised. There were eversion, flattening, and some pain in the groin, but no shortening at first. The eversion was not helpless and there was little pain on motion. An anaesthetic was not given on account of the patient's condition. The eversion alone continued for three and one-half weeks. The patient is improving rapidly and can now raise the leg and invert it, so Dr. Eve thinks there was no fracture. Dr. Eve stated that we should not be in a great hurry in making a diagnosis of fracture of the neck.

Dr. Nichol reported an anterior dislocation of the shoulder caused by a "kick" of an automobile. He said that he had never heard of this kind of an accident occurring in this way before.

Dr. Lucian Caldwell reported a series of six cases, five of which were diphtheria treated by the doctor in the past few months. Of these, two were treated without antitoxin, the family refusing to allow its use. The sixth case was that of a child ten months old in which laryngeal diphtheria had been diagnosed and intubation deemed necessary. Dr. Harris was called to perform the operation, but was unable to enter the larynx. The child's condition was desperate, and Dr. Robert Caldwell was called and a tracheotomy was done. The child died in a few hours. Post-mortem showed no membrane and the larynx and trachea was found to be so small as not to admit of the introduction of a broom straw. Dr. Caldwell exhibited the specimen to the Academy.

In discussing these cases, Dr. Harris stated that this was the first time he had been unable to enter the larynx and was glad to see the specimen to find an explanation of his failure this time.

Dr. Bloomstein said that he arose to con-

demn the treatment of Dr. Caldwell's in the two cases not treated with antitoxin. He said that if a diagnosis of diphtheria was made, and he was not allowed to use antitoxin, he would withdraw from the case.

Dr. Hill stated that in every case of croup in a child persisting for over 24 hours, and if a bacteriological examination can't be made, he gives antitoxin. He remarked that on one examination a bacteriological report is often negative.

Dr. W. B. Anderson reported a case of diphtheria followed by post-diphtheritic paralysis involving muscles of the neck and limbs. The diaphragm was also apparently involved. The child is now convalescent. Dr. Anderson also reported cases of diphtheria in twin babies twenty months old. There was marked cellulitis of the throat present. After the children had apparently recovered, they both died suddenly within twenty-four hours of each other.

Dr. Bureh reported a case of appendicitis operated on during the third attack, and although less than twenty-four hours had elapsed since the onset of the attack, there was a large amount of free pus in the abdomen. A culture showed a mixed infection of a staphylococcus and colon bacillus. The patient is well on the road to recovery. Dr. Bureh exhibited the cultures.

Dr. Litterer, in discussing Dr. Bureh's case, stated that a staphylococcus albus associated with a colon bacillus gives a better prognosis than the staphylococcus aureus, many authorities believing that the staphylococcus albus is a benefit in mixed infections of the peritonem. A streptococcus, Friedlander bacillus or pyocyaneus mixed with a colon bacillus gives a grave prognosis.

Dr. Floyd reported a case of perforation of the appendix within fourteen hours of the onset of the attack. At operation the abdomen was found full of pus. The patient made a slow but complete recovery.

Dr. Howard King reported a case of localized hyperidrosis of the heel and right hand. The patient was otherwise well.

Dr. Oughterson reported the following case: "Male, white, aet. 26, single. Foreman of a construction crew of Western Un-

ion in Louisiana. Past, personal and family history negative. About February 26 the patient was taken ill of what he thought was biliousness. There was some general aching and soreness. He took some calomel and felt better the following day, which was Friday. On Saturday he had a chill followed by severe headache, and on Sunday the patient became very delirious and noisy, requiring restraint at times. This condition obtained for about two weeks, when the active delirium was replaced by a quieter, semi-conscious state. At times he was able to recognize his brother for a few moments. He remained in about the same condition until admitted to St. Thomas Hospital on April 7th. The physician in charge reported aestivo-autumnal parasites in the blood at the beginning of the illness. The physical examination was reported negative except for a marked retraction of the neck muscles; so marked as to make meningitis a consideration in the diagnosis. No spinal puncture was made. Some dullness was found in the lungs, it not being stated in which lung. The temperature for the first two weeks varied from 97 F. to 102 F. by the axilla. Pulse 90 to 120. At the expiration of two weeks the temperature began running a lower course; generally subnormal, occasionally reaching 99. The mental condition was unchanged. The patient received quinine hypodermically. His physician thought it added to the patient's delirium, so other treatment was instituted—Fowler's solution, K. I. ergotol and bitters.

The patient was admitted to St. Thomas Hospital, this city, on April 7th in the following condition: Semi-comatose; could be aroused, but talked unintelligently. Bowels and kidneys acting involuntarily. Physical Examination: dullness over right upper back. Breath sounds diminished over same area. The interpretation was pleural effusion. The quantity was thought to be small, so was not removed. Abdomen flat, otherwise negative. Arteries somewhat more prominent than normal for age of patient. Mouth foul, tongue furred, a well developed pyorrhea alveolaris. Nervous System: Rigid neck muscles. Reflexes intact, but diminished and equal. Sensory changes could not be elicited

on account of mental state. There was some photophobia. Headache continuous. Tongue protruded slightly to the right. The tongue appeared to drag on the teeth, which we thought accounted for the deviation. Urinalysis negative. Radial systolic blood pressure 105. Feces; some blood and mucous; no parasites. Blood: stained specimen negative as to parasites, three separate examinations being made by Drs. Litterer, Floyd and myself. Blood culture negative. April 2nd., leucocytes 8,000. April 12th., 25,000; polys. 88 per cent. April 20th, 21,000. Temperature 99 to 100. Pulse 100 to 120. Widal negative to straight typhoid and para "A" and "B." Wasserman negative in blood. No test made of spinal fluid. Spinal puncture was made and 20 C. C. clear fluid withdrawn, no cells being found.

As no diagnosis had been made up to this time it was decided to administer quinine hypodermically on the history alone. Twenty-five grains were administered daily for five or six days without any improvement, when it was discontinued. Brain tumor or abscess was thought of at this time. Dr. Wood examined the eye grounds and reported some oedema around the nerve head with slight hemorrhage in right retina. This examination was made on April 17th. May 23rd eyes were examined by Dr. Cayce, who reported beginning choked disc in both eyes. The antra were illuminated by Dr. Cayce and reported cloudy. June 1st, Dr. Cayce examined eye grounds again and reported choked disc progressing. The headache still persisted. Drs. Harris, Witt and Haggard, who had seen the case several times, were again asked to see him. Some improvement had taken place in his general condition, but the eye grounds had grown progressively worse. However, no one had the courage to insist upon opening the skull. Another spinal puncture was made and about 20 c. c. clear fluid withdrawn under slight pressure. This showed 7 lymphocytes. Syphilis and tuberculosis was thought of. Saturated solution of potassium iodide was administered in increasing doses up to one hundred grains three times daily. Improvement became apparent from that time until he left the hospital. It

might be mentioned that a polyvalent vaccine was administered in the interim for the pyorrhea."

Dr. Floyd: The patient left the hospital on June 15th. The next day his temperature rose to 102 F., following an attack of severe headache. The next day he was well. On the following day he had a chill, the temperature reaching 106 F. There was very severe headache. The blood was examined for malaria and found loaded with tertian parasites. The leucocyte count was 16,000. Hypodermics of quinine and urea were administered and patient has been gradually improving since.

Dr. Litterer: Believes this patient's trouble started with malaria, but not with the aestivo-autumnal type as reported by the first physician. He does not think that malaria could account for all the symptoms, especially the high leucocyte count. Thinks the alveolar pyorrhea may account for the latter.

Dr. Crawford thought that an infection in one of the sinuses could account for the temperature and leucocytosis.

The Academy then adjourned at 10 p. m.

J. F. GALLAGHER, Secretary.

HAMILTON COUNTY.

The 774th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order Friday, 8 p. m., by the Vice President, Dr. Wm. Bogart, with following members and visitors present:

Visitors—Drs. W. L. Gahagan, New York; J. E. Clark, Cleveland; W. E. McGurder, Baltimore; F. E. Pilcher, Detroit; C. M. Taylor, Columbus, O.; R. M. Bruns, Baltimore; E. E. Elliott, Omaha; Chas. S. Corly, C. H. Harbough, Philadelphia; Judge W. A. Kerr, Minneapolis, and Col. Ed Watkins, Chattanooga. Messrs. Crowe, Boston; H. L. Doud, Columbus; J. L. Dorn, New York; Thos. O. Okeefe, New York; E. W. Fraim, Philadelphia; H. H. Shom, Reading, Pa., and H. M. Letton, of Chicago. Local Visitors—Dr. Roberts and Prof. Bierly.

Members—Drs. Yarnell, Fowler, Wm. Bogart, Godsmark, F. E. and Y. L. Abernathy, H. B. Wilson, J. M. Broyles, Hillas, Dunbar Newell, Fletcher, Blackwell, Haskins, F. T.

Smith, Allen, Dietrich, Selden, McQuillan, Wallace, W. G. Bogart, Rathmell, Williamson, Gee, Fancher, W. E. Anderson, Travis, Brooks, Meacham and G. Victor Williams.

Minutes of the previous meeting were read and approved.

It was moved, seconded and carried that we change meeting night from October 31st to October 29th, in order that we have visitor to fill the program on October 29th.

It was moved, seconded and carried that Secretary notify members to attend smoker on October 29th, which would be free.

It was moved, seconded and carried that we dispense with the regular program and extend the floor to any distinguished visitors attending the meeting of the International Claim Association.

We were then favored by talks from Dr. C. M. Taylor, of Columbus, O., on fraudulent claims against accident companies, followed by Dr. C. H. Harbough, New York; E. W. Fraim, Philadelphia; R. M. Bruns, Baltimore; F. E. Pilcher, Detroit; P. B. Trone, Indiana; Dr. J. E. Cook, Cleveland; W. L. Gahagan, New York; A. J. Dorn, New York, and Col. Ed Watkins, Chattanooga.

Dr. J. W. McQuillan was called on to respond in behalf of the Medical Society.

Members of the Society taking part in the discussion were Drs. Rathmell, Travis, W. G. Bogart, Raymond Wallace and G. Victor Williams.

The program was announced for October 11th and the Society adjourned.

The 775th regular meeting of the Chattanooga Academy of Medicine and the Hamilton County Medical Society was called to order by the President, H. P. Larimore, October 17th, at 8 p. m., with the following members and visitors present:

Visitors—Drs. Dickey, Roberts and Walker.

Members—Drs. Wise, Rathmell, E. B. Anderson, W. G. Bogart, Meacham, Travis, Wagner, F. T. Smith, Shumaker, Fancher, Long, Hogshead, Allen, Dietrich, Wilson, Yarnell, T. E. and Y. L. Abernathy, Wallace, McQuillan, Willard Steele, Haskins, Holman, Renner, Williamson, Dunbar and Ed Newell,

Woolford Hillas, Haymore and G. Victor Williams.

The minutes of the previous meeting were read and approved.

Dr. Travis reported progress and plans for entertaining the Eye, Ear, Nose and Throat Specialists.

Dr. Smith read letters from Dr. Murphy of Cincinnati in reference to the coming convention. Dr. Raymond Wallace reported compression of spinal cord by fracture of lamina with paralysis, which promptly recovered after laminectomy.

Dr. E. B. Anderson reported his experience at Johns Hopkins.

Dr. W. G. Bogart reported case of Dystocia with dead foetus.

Dr. Frank Trester Smith, the essayist of the evening, read a short but interesting paper on "Iritis," which was discussed by Drs. Hogshead, Long, Willard Steele and Travis. Discussion was closed by the essayist.

There being no further business, the meeting adjourned.

The 776th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order October 24th by the President, H. P. Larimore, with the following members and visitors present:

Visitors—Drs. Dickey, Walker, Randall, Roberts, Cates and Prof. Bierly.

Members—Drs. Null, Barnett, Meacham, Wylie, Fancher, Hackney, Dietrichs, Wise, Clements, Shumacker, Richardson, E. B. Anderson, Hogshead, Selden, E. B. Johnson, Rathmell, E. C. Anderson, Wm. Bogart, McQuillan, Y. L. and T. E. Abernathy, Fowler, F. T. Smith, E. T. and Dunbar Newell, Renner, Brooks, Sullivan, Boone, Green, Holman, Reisman, Wert Larimore and G. Victor Williams.

Minutes of the previous meeting were read and approved.

Dr. B. F. Travis, Chairman of the Entertainment Committee, reported favorable progress on their work. Drs. Dietrich and F. T. Smith also discussed plans for the coming convention.

Dr. Selden explained a very interesting chart on the modification of milk, which was

discussed by Drs. Sullivan, Roberts and Fancher. Discussion was closed by the essayist.

We had some interesting case reports and discussions by Drs. Travis, Smith, Hogshead, Wylie, Roberts and McQuillan.

Dr. Melbourne Clements, the essayist of the evening, then read an extended and interesting paper on "Infection of the Hand, Pathology and Treatment," which was discussed by Drs. Barnett, Fancher and Ed Newell. Discussion was then closed by Dr. Clements.

There being no further business, the Society adjourned.

The 777th meeting of the Chattanooga Academy of Medicine and the Hamilton County Medical Society was called to order October 29th, 1913, by the President, H. P. Larimore, with the following members and visitors present.

Visitors—Drs. Ballinger, Chicago; W. H. Tuckerman, Cleveland, O.; Kate W. Baldwin, Philadelphia; R. W. Cochran, Madison, Ind.; W. C. Tuckerman, Cleveland, O.; R. G. Buckner, Asheville, N. C.; R. J. Teague, Durham, N. C.; R. W. Bledsoe, Covington, Ky.; F. W. Dean, Council Bluff, Ky.; F. F. Teal, Lincoln, Neb.; E. B. Cayce, Nashville, Tenn.; W. P. Renner, Greensboro, N. C.; C. J. Broyles, Johnson City, Tenn.; Samuel Iglauer, Cincinnati; J. W. Murphy, Cincinnati, and E. L. Jones, Cumberland, Md.

Local Visitors—Drs. Dickey, Walker, Tatum, Roberts and Eblen.

Members—Drs. Abernathy, Larimore, N. C. Steele, Hope Smith, Long, Hackney, Meacham, Willard Steele, Haymore, Barnett, Renner, Cobleigh, Richardson, Wert, Deakins, Null, Goodwin, D. N. Williams, Watson, Barrette, Brooks, McQuillan, Zeigler, Holman, Dunbar Newell, Winter, Williamson, Travis, Hillas, Shoemaker, Dietrichs, Hogshead, Horton, Yarnell, Sullivan, Wylie, Wm. Bogart and G. Victor Williams.

The minutes of the previous meetings were read and approved.

We were favored by case reports by Drs. Tuckerman and E. L. Jones.

Dr. W. L. Ballinger, of Chicago, then delivered a lecture on Assessory Sinuses of the Nose, Infection and Treatment. This talk was enjoyed by all and discussed by Drs. Tucker-

man, Dean, Bledsoe, C. J. Broyles, Teal, Hogshead, Dietrichs, Long, Travis, Hackney, Goodwin, Smith, N. C. Steele and Willard Steele.

It was moved, seconded and carried that we extend to Dr. Ballinger a rising vote of thanks.

There being no further business, the Society adjourned.

The 778th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order by President H. P. Larimore, November 7th, 1913, with the following members present:

Members—T. E. and Y. L. Abernathy, W. G. and Wm. Bogart, Barnett, Meacham, Blackwell, Shumacker, Fancher, Remer, Wilson, Sullivan, Brooks, Cobleigh, Dietrichs, Yarnell, West, Smith, Richardson, Wise, Boone, Hogshead, Wallace, E. B. Anderson, Horton, E. T. and Dunbar Newell, Haymore, Hillard, Wert and G. Victor Williams.

Visitors—Drs. Dickey and Randall.

Minutes of the previous meeting were read and approved.

A letter from Dr. J. W. Murphy, of Cincinnati, to Dr. Dietrich thanking him and the members of the Committee and the Society as a whole for their work in entertaining the members of the Academy of Ophthalmology and Otolaryngology.

Dr. Ed Newell showed a case where ten-day chronicized catgut remained tied around an artery for four months.

Dr. H. L. Fancher showed several interesting specimens of extra large Uterine Fibromata and sequestrum of humerus and a series of Skigraphs.

Drs. Wise, T. E. Abernathy and Barnett reported interesting cases.

Dr. Wm. Bogart, the essayist of the evening, then read an interesting paper entitled, "The Doctor," which was discussed by Drs. Yarnell, Wise, Wert, Barnett, Y. L. Abernathy, W. G. Bogart and G. Victor Williams. Discussion was closed by Dr. Wm. Bogart.

There being no further business, the Society adjourned.

G. VICTOR WILLIAMS, Secretary.

NEW VITAL STATISTICS LAW.

To the Profession of Tennessee:

On January 1st, the new Vital Statistics Law will be put in operation. Some time during the month of December the Local Registrar will hand you the blank forms necessary for your complying with the law. Also, he will hand you a pamphlet of instructions to physicians. In this pamphlet will be found a list of terms often used in assigning the cause of death, but which should be avoided.

You will have received before this issue of the Journal reaches you, a vest pocket edition of the "International Classifications of the Causes of Deaths," which Mr. Harris, Director of the Census, very courteously agreed to forward. I will respectfully urge upon you to look this over very carefully, and adhere to it as closely as possible in assigning the cause of death. That assigning the proper cause of death in terms which have a place in scientific medicine is an important matter will be apparent to every physician, but, in spite of this fact, the use of terms now dropped from modern medical nomenclature constitutes a most vexing problem in other States. So the extent to which the profession of Tennessee adheres to the "International Classification of Causes of Deaths," in filling out death certificates, will determine, to a considerable degree, the statistical value of the certificates.

Reports that have been constantly coming in from various sections of the State are indeed very encouraging, and I now indulge the hope that we will be able to join the Registration area of the United States within one year's time.

This law has been heralded by sociologists, scientists, commercialists and statesmen as being a step of undoubted progress, which will, in due time, contribute materially to the sanitary and commercial development of the South, of which Tennessee is a part.

Should any physician fail to receive any of the supplies above mentioned, a card to the Bureau requesting them will be sufficient to secure them. This Bureau is crowded with correspondence, but I will say that any communication to the office will receive the promptest attention possible.

Respectfully,

H. H. SHOULDERS, M. D.,
State Registrar.

THE JOURNAL

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BROWN'S MODIFICATION OF HODGEN'S SPLINT.*

By J. F. Gallagher, M.D., and W. M. McCabe,
M.D.
Nashville, Tenn.

Insofar as the description of the splint and the conclusions deduced from its use are concerned, this paper is almost identical to that read by one of us before the Nashville Academy of Medicine in February, 1912, and published in the March issue of the State Journal for that year. The paper as read at that time was deficient in that no detailed cases were reported and no definite records given showing the immediate and remote results of the treatment of fractured femur by this splint. Although used by one of us since 1906, no detailed history and final results were preserved and the eighteen cases reported herewith have, for the most part, been treated within the past year; fourteen by Dr. McCabe at the Nashville City Hospital, and four by the speaker.

In presenting this method of treatment of fractured femur and allied conditions, we are not unmindful of the trend, more pronounced in some sections than others, toward operative treatment of fractures; and this method of treatment is offered for the consideration of both the surgeon with ideal surroundings and the general practitioner without them.

It may be said without fear of serious con-

tradiction that many surgeons and most general practitioners approach the treatment of fractures with no little misgiving. The dislike for this part of practice may be found, as in many other phases of our profession, not so much to the lack of skill as to a lack of knowledge of the best procedure to adopt. Waiving this, however, we are conscious of the fact that an error in the treatment of fractures may be followed by permanent impairment of form or function of a limb which may not only affect the patient's future, but be a constant source of chagrin to the physician.

It is with no sense of apology, therefore, that we would briefly call your attention to an appliance for the treatment of fractures of the femoral shaft. Though comparatively little used in this section of the country, it is at once an extremely simple and most efficient apparatus for the treatment of this condition. I refer to the Hodgen Splint.

This device is by no means new, it being a modification, conceived by Hodgen many years ago, of the old Nathan Smith anterior splint. The original Hodgen was difficult to keep in order, and it is due to Dr. Geo. S. Brown, of Birmingham, Ala., that we have the splint in the perfected form as shown here. It is the original Hodgen splint and not Brown's efficient modification that we see pictured in most text-books which, only too frequently, refer to the splint in the briefest manner (if at all), though in the main commendatory.

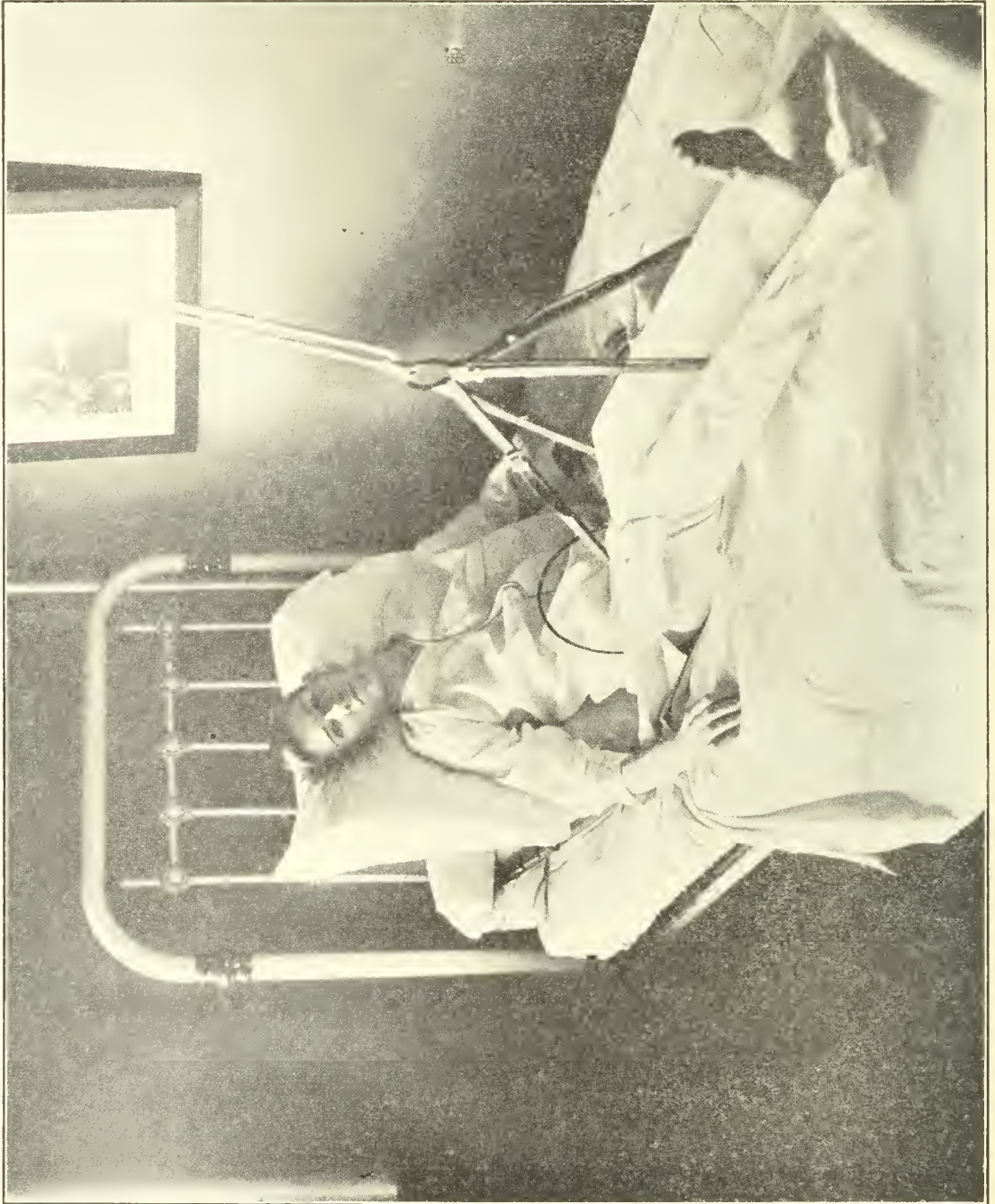
At a risk, therefore, of being somewhat tiresome, I shall briefly describe the splint, for

*Read before Tennessee State Medical Association, April, 1913.

a comprehensive working knowledge cannot be gained from most of the text-books on surgery.

Let me say in the beginning that any blacksmith or tinsmith can make the splint in a

by an arch of such height as to pass well over the thigh. The length over all is thirty-six inches. On the upper side of the frame four loops of smaller wire are placed, those nearer the proximal extremity being nine inches from



very few minutes if given the dimensions. The material is 3-16 inch brass or iron, or No. 4 wire, all in one piece. The distal extremity is six inches wide and the proximal eight inches, the ends of the latter being connected

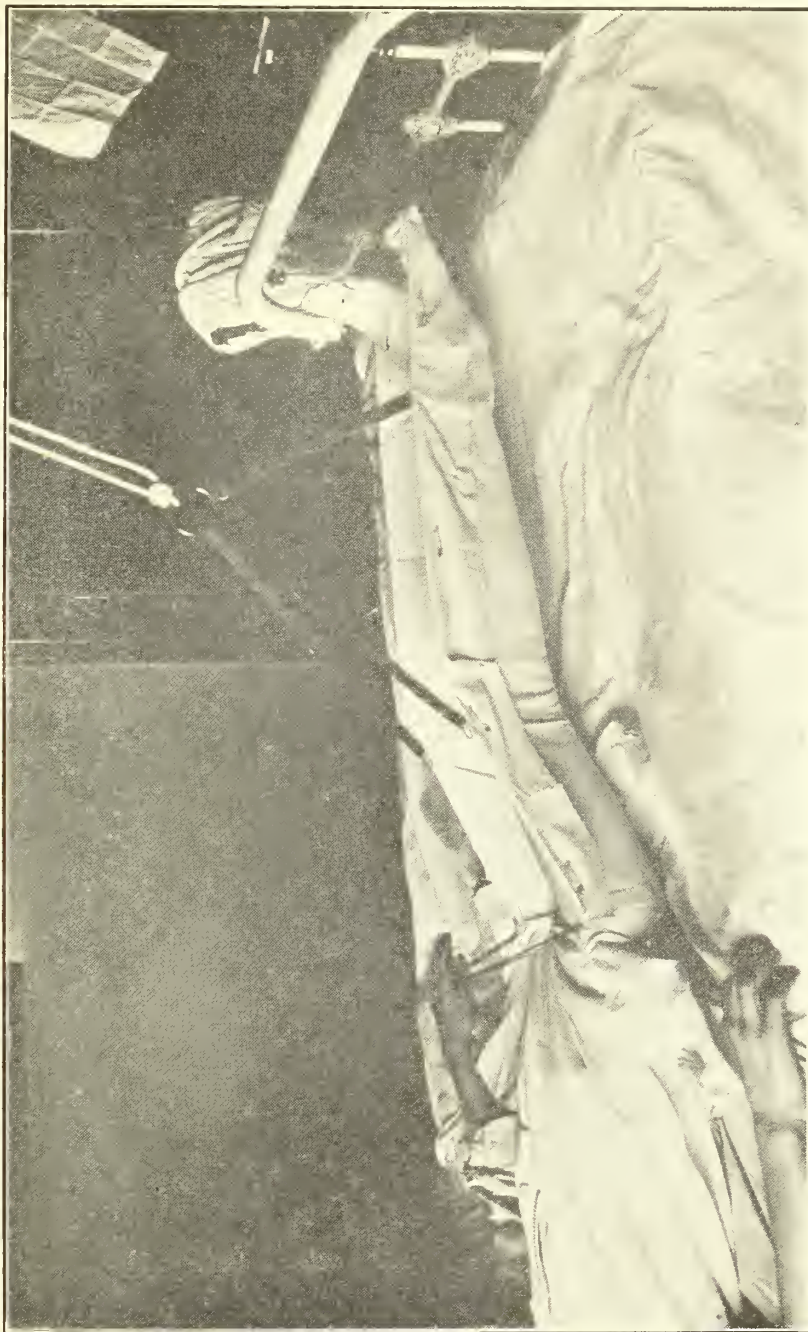
the end, while those toward the distal extremity being ten inches from its respective end. These loops are for the supporting cords or straps. Twelve inches from the proximal end the splint is bent at an angle of about

170 degrees. This angle will allow the limb to assume a position which gives most comfort, viz., that of partial flexion.

To the supporting loops are attached ad-

venient support not connected with the bed.

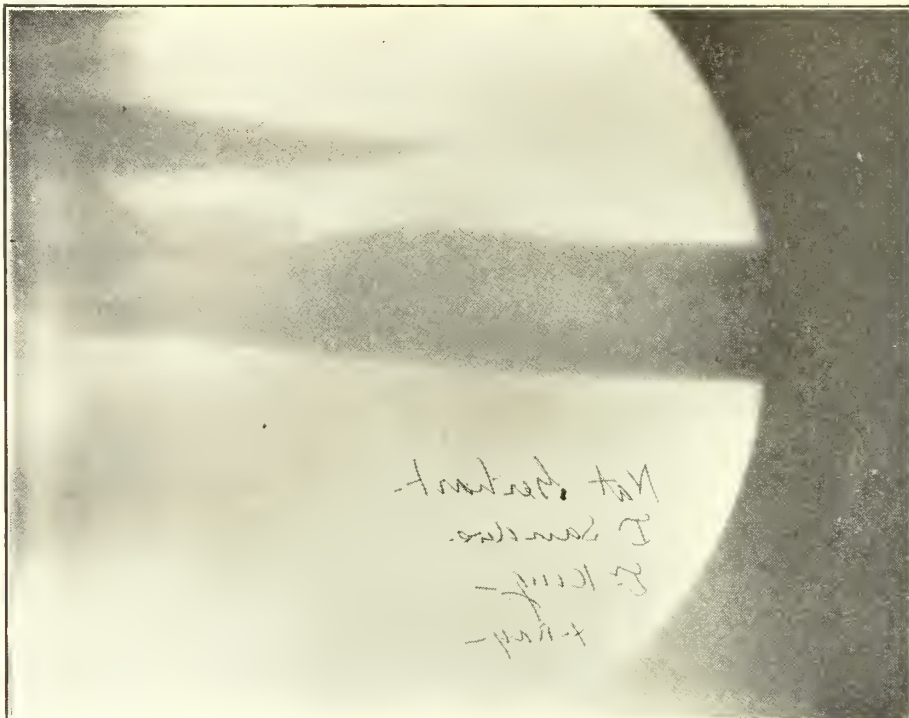
A piece of ordinary unbleached domestic, or light canvas, is so attached to the frame



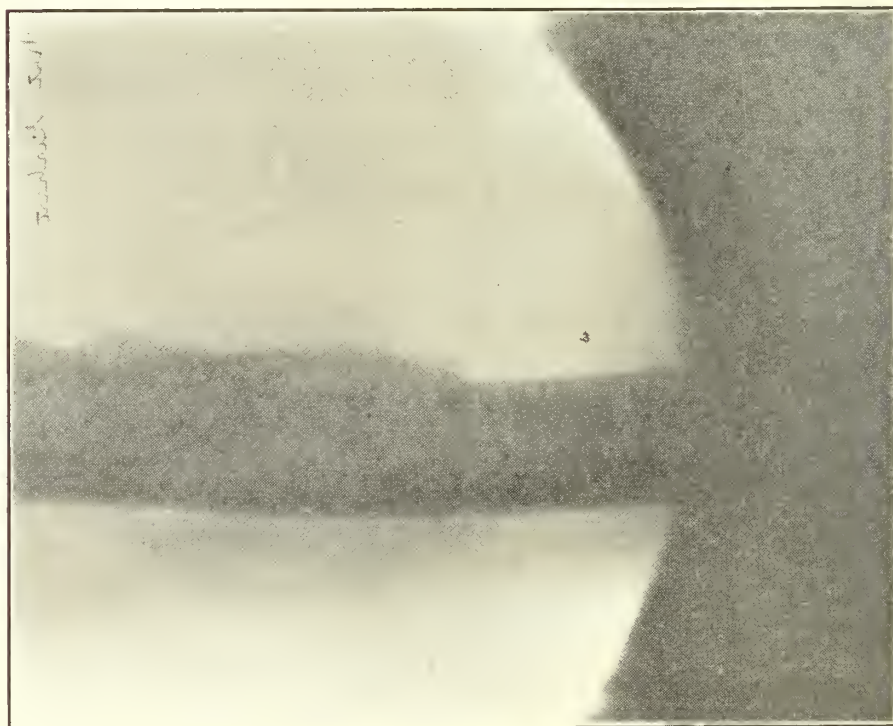
adjustable straps with buckles, or small cords equipped with tent-blocks, and are passed through a ring about fourteen inches above the frame. The latter is attached to a rope or sash cord swung from the ceiling or some

as to form a hammock in which the limb is to rest. This is draped across so as not to form wrinkles and pinned on either side with safety pins.

The preparation of the limb is the same as



CASE EIGHTEEN AT TIME OF FRACTURE



CASE EIGHTEEN AFTER TREATMENT WITH HODGENS' SPLINT

one would adopt for the application of a Buck's extension; that is, the limb is shaved on each side, dried, and two-inch adhesive applied, extending well above the knee. The malleoli are protected and a spiral reverse bandage thrown around the limb, paying especial attention to the region of the ankle, as here the adhesive will loosen if not held firmly in place by the bandage. To the free ends of the adhesive short pieces of bandage are attached which are to hold the limb to the distal extremity of the splint. This will supply traction when the splint is in place, and, in fact, is the only attachment the limb has to the splint.

The limb and the splint having been prepared, we are now ready for the application. With the limb in the hands of an assistant standing at the foot of the bed and making steady traction, the splint is slipped on the limb, the loop over the thigh, and passed well up to the perineum. The bandage which has been attached to the ends of the adhesive on the leg, is tied to the cross piece at the end of the splint. The splint containing the limb is now suspended on the sash cord hanging from the ceiling.

A pair of spring scales may be interposed between the rope and the ring for the measurement of the amount of traction; first weighing the limb and then moving the bed away from the point of suspension until an additional ten or fifteen pounds registers, which, of course, is the amount of traction imposed upon the limb.

The eversion is slightly over-corrected (as well as the normal longitudinal axes of the limb preserved) by adjusting the four straps, or cords with tent-blocks, as the case may be. The bed is pushed to one side so as to slightly abduct the limb. The pull on the limb will have a tendency to drag the patient toward the foot of the bed, so the patient must be instructed to keep well up to the head. Indeed, he will soon learn that the constant traction of ten or fifteen pounds will overcome the muscle-spasm and give more comfort when in the correct position, so this advice, as a rule, will not have to be repeated.

The splint at all times must be entirely suspended. Rest upon a pillow or bed or bed-

stead will defeat every object of the appliance. After attention to the splint is nothing. An occasional adjustment of the supporting cords or straps is all, and this is required very seldom.

The principle on which the splint works is as simple as the application and its maintenance. The femur is surrounded more completely and by larger muscles than any other bone of the body. After fracture, gravity and muscular contraction give rise to the deformity. By supporting the limb in the hammock and preserving the normal axis of the shaft of the bone, gravity is overcome. By making constant and sufficient traction, not only is the muscular spasm overcome, but the muscle itself is paralyzed and the lower fragment of the fractured bone is gradually drawn in the axis of the bone to the place from which it came. The ham-string muscles behind the quadriceps extensor anteriorly form strong longitudinal bands when stretched taut and which efficiently splint the two fragments of bone.

From the beginning the patient may be allowed to sit up in bed with a back-rest to eat, read, write, use the bed-pan and move about to facilitate the changing of the bed linen. These may be done without the slightest fear of disturbing the bones at the seat of fracture, for when the body is moved the limb in the splint moves as a whole from the hip joint, the easiest point for motion to occur.

The application of this splint is by no means limited to the treatment of simple fractures. If it is efficient here, it is invaluable in treating compound fractures of the femur. A piece of the hammock may be cut across, unpinned opposite the wound and thrown to the opposite side when a dressing can be applied without disturbing the fragments.

All of us realize the dangers of a prolonged recumbent posture in the aged, which is necessitated by the ordinary treatment of fractures of the neck of the femur. The treatment of this condition with a Hodgen splint, by which we apply traction and rest, letting the patient sit up, is most satisfactory.

To summarize, then, we would say that:

First. The splint is cheaply and easily made.

Second. It is easy to apply and easy to keep in order.

Third. It gives the patient almost complete comfort during his six weeks in bed.

Fourth. It may be used to great advantage in other affections of the lower extremity, notably, intra-capsular fracture.

The results of the use of this splint will be detailed by Dr. McCabe in his review of the cases treated.

Case I.—W. O., male, age 26. Fracture of middle thigh of femur by direct force. Primary shortening two and one-half inches. Hodgen's splint applied for eight weeks. Perfect union without shortening.

Case II.—Mary P., female, age 56. Frail, anaemic woman. Fracture of the right femur at the neck. Hodgen's splint applied for eight weeks, with one-half inch shortening. One year later she shows same amount of shortening, and limps slightly.

Case III.—R. W., male, age 67. Fracture of femur at junction of upper and middle third. Primary shortening two and one-half inches. Hodgen's splint applied for eight weeks, with firm union, and no shortening.

Case IV.—Walter H., male, age 22. A crazy negro whom we were unable to handle satisfactorily. He received a shot-gun wound about the middle of right femur, producing a compound comminuted fracture. He was anaesthetized, and injured tissue cut away. Drainage was instituted. Hodgen's splint was applied the following day, but was often taken off by patient. He left the hospital in twelve weeks, with firm union, but still discharging pus. He had about three-fourth inch shortening.

Case V.—Jim. D., male, age 45. He received a gun-shot wound in right leg, which produced a compound comminuted fracture just below great trochanter. He was anaesthetized, and wound cleansed by cutting away injured tissue. Drainage was instituted. Hodgen's splint was applied the following day. His wound discharged pus for three weeks, but at the end of the fourth week had practically closed. About the fifth week he developed a severe infection of his leg, which resulted in gangrene. Hip-joint amputation was performed, but patient died. Dissection

of leg showed firm union, with good alignment and abundant callous.

Case VI.—Henry B., male, age 23. Fracture of left femur at juncture of middle and lower third. Primary shortening three inches. Hodgen's splint applied for eight weeks, with firm union and one-fourth-inch shortening. Three months later was walking with very slight limp, and pursuing his occupation as laborer.

Case VII.—Louise D., female, age 68. Fracture of neck of left femur. Primary shortening two inches. She was kept in Hodgen's splint for four weeks when an intractable diarrhoea and incontinence of urine developed, producing excoriation of buttocks, and necessitating removal of splint. She left hospital in twelve weeks, with one-half-inch shortening.

Case VIII.—S. B. W., male, age 42. Fracture of left femur, three inches above knee. Primary shortening one and one-half inches. Hodgen's splint applied for six weeks, with firm union, one-quarter-inch shortening resulting.

Case IX.—Thomas B., male, age 14. He showed every evidence of inherited syphilis. He fell while playing, fracturing his femur at junction of upper and middle third. Primary shortening two inches. Hodgen's splint applied for six weeks, with firm union and no shortening. Patient received mercurialunctions while in hospital. We saw patient six weeks after he left hospital, and he was walking with a slight limp.

Case X.—John F., male, age 70. Fracture of the neck of right femur. Hodgen's splint applied, but patient died the next day.

Case XI.—E. W. P., male, age 60. Primary shortening one and one-half inches. Hodgen's splint applied for eight weeks. Patient left hospital in three months, with one-fourth-inch shortening.

Case XII.—Pop T., male, age 23. He received a pistol shot of left leg, fracturing femur just below trochanter major. Primary shortening two inches. Hodgen's splint applied for eight weeks, with firm union, and no shortening resulting. Have seen patient several times since, and he walks without a limp.

Case XIII.—John W., male, age 20. He received pistol shot of left leg, just below trochanter major. Primary shortening two and one-half inches. Hodgen's splint applied for eight weeks, with firm union, and no shortening.

Case XIV.—Duncan H., male, age 40. Fracture of shaft of left femur. Patient is mentally weak, and would not co-operate with us. Hodgen's splint was applied for four weeks, but patient would get it out of adjustment several times a day. At end of four weeks there was firm union. A plaster cast was applied and patient sent home.

Case XV.—Mrs. L., age 68. Fell May, 1912, sustaining a Colle's fracture of right wrist and fracture of neck of right femur. Colle's reduced under anaesthesia, and limb put up in Hodgen's splint. In twelve weeks was able to walk about house unaided. General health very poor, and is now confined to bed with failing heart. Measured February, 1913. Shortening one-half inch.

Case XVI.—Mrs. P. Two years ago fractured neck of right femur. Was treated with Hodgen's splint, with shortening of one-half inch. While convalescent, fell, fracturing other hip. This was also treated with Hodgen's splint. Report from her doctor states that she has no trouble with hips, but is unable to walk very much on account of joint changes in knees and ankles.

Case XVII.—Mr. A. R., age 62. In August, 1911, fractured upper third of right femur. His ankle of same leg was sprained also. Patient was extremely difficult to control. Was treated in Hodgen's splint for six weeks. Measured April, 1913, no shortening found. Walks with slight limp, due to stiffness of ankle.

Case XVIII.—Nathan G., age 18. In November, 1912, fractured right femur, as shown by accompanying radiographs, just below the great trochanter. Was treated one week with sand bags and extension, consultation having urged operative interference, during which time he required three 1-4 gr. doses of morphine in twenty-four hours. Was put up in Hodgen's splint, and morphine withdrawn on second day. After six weeks was sent home.

Measured September, 1913. No shortening, and walks without limp.

Summary.

Of the eighteen cases treated, eight were fractures of the shaft, not compound. Of these eight, there was no shortening in five—or 62.5 per cent. In two there was shortening of one-fourth inch, or 25 per cent. One left the hospital before results could be determined.

There were five compound fractures of the shaft, all of which were comminuted. Two, or forty per cent showed no shortening. One had shortening of one-fourth inch; one shortening of one-half inch. One died of infection and hip-joint amputation.

The ages of the five cases of fracture of the neck of the femur varied from 56 years to 70 years. One case had shortening of one-fourth inch; two had shortening of one-half inch, and in one the amount of shortening was not determined on account of both limbs being fractured. One died—a debilitated old man on the day following admission to the hospital.

DISCUSSION.

DR. DUNCAN EVE, JR., Nashville: Dr. McCabe and Dr. Gallagher have certainly accomplished a great deal by the modified splint of Dr. Brown, and I think it is ideal treatment for fracture of the femur at the beginning. I do not agree with them that we should carry this treatment on with the splint all the way through. As a rule, I use the Hodgen splint for the first one or two weeks, then put the patient in a plaster-cast, because it is an ideal dressing. At this stage I always give an anaesthetic. During the first week or ten days they can get up and read and also take nourishment, etc. I believe in the use of the Hodgen splint, followed with a plaster-cast.

I read an interesting article a few days ago in which there was tabulated 750 cases of fractures of the shaft of the femur, this article having been gotten up for the Pennsylvania State Medical Society by Dr. W. L. Estes, Dr. John B. Roberts of Philadelphia, and Dr. Pullman of Pittsburgh, and Dr. Edward Martin of Philadelphia, men who have had probably a larger experience in fractures than any group of men in the United States today. They report having collected 760 cases in the State of Pennsylvania in the last two years. The average shortening for the cases was one-half inch. This, of course, was in fractures of the shaft. The primary shortening av-

eraged one and one-third inches, and the final shortening was exactly one-half inch. Dr. Estes wrote surgeons throughout the United States in regard to their treatment and their final results in fractures of the shaft of the femur, and he found that the average shortening in these cases, according to the replies received from 90 surgeons, was three-quarters of an inch out of 760 cases treated of fracture of the shaft of the femur. Of these 763 cases, only three were treated by some form of Buck's extension. It is my practice, as a rule, to treat a fracture of the shaft, the upper half, or anywhere in the neighborhood of the neck, by Whitman's method. I use for the first ten days the Hodgen splint, by flexion and abduction, at the end of which time I put the patient under a general anesthetic and resort to Whitman's method. Dr. Moore, at Minneapolis, has had excellent results by treating these cases by the Maxwell modification.

DR. JERE L. CROOK, Jackson: The importance of this subject is so great that the members of the Association ought to spend considerable time in discussing it, as it appeals to every single man who is licensed to practice medicine, unless he confines his practice entirely to internal medicine. As there are so many potentialities for evil, both as to the functional result for the patient and malpractice suits for the surgeon, the subject is one of extreme interest to us all.

I have had little or no experience with the use of the Hodgen splint in these cases. I saw Dr. Brown's splint while I was on a visit to Birmingham three or four years ago, and went home with the idea that I would like to use it in the next case that presented itself, but I neglected the details of instruction which I received from Dr. Brown at the time. I have been using a combination of Buck's extension and plaster-of-Paris cast, and this has given me very fine results. By this method I have been able to get satisfactory results, except in certain cases of compound fracture, and in this connection I wish to detail a case that came under my observation and treatment not long since.

The patient was a young man who was thrown from a bicycle in front of a moving street car, and the limb ground underneath the wheels of the car, so that the skin was torn off; that is, the posterior portion of the skin below the lower third of thigh, and he sustained a compound double fracture of the femur at the lower and upper thirds. The crush of the tissues in the leg extended into the muscles, large portions of which sloughed away with all the skin and tissues adjacent. The boy was practically pulseless all night from the shock and I thought he would die before morning. Great difficulty was presented in the treatment of this case in dealing with the crushed skin and muscles and the

region about the fracture. I could not use any ordinary splint, so I secured an ambulatory pneumatic splint, and in that way was able to apply support at the point of fracture, together with extension and still have access to the calf of the leg and posterior part of thigh where the laceration was so great. About one-third of the gastrocnemius muscle sloughed out and all the skin from above the knee down to the ankle, this part being entirely bare of flesh and requiring frequent dressing. This splint proved itself to be ideal in this particular case, and I have the satisfaction of having an absolutely good result, with practically no shortening. I do not believe any splint I could have used would have given me the service which the ambulatory splint did in this particular case.

DR. ROBERT MANN, Memphis: The gentlemen have been talking about what to do in these cases, but I want to call your attention to one point, namely, what not to do in these cases of compound fractures. It used to be the custom that whenever a man sustained an injury around the thigh or leg, the first thing to do was to put the finger in to see whether or not there was a fracture, and that is what you do not want to do. You should keep your fingers out of compound fractures, and in that way avoid infection.

DR. J. A. CRISLER, Memphis: I only want to say a few words in behalf of the splint that we are using. My associate, Dr. Eugene Johnson, has used it with a great deal of satisfaction in cases of fracture of the neck of the femur in old people. I do not know whose splint it is, or whether he stumbled on it accidentally, or how. But I think if those of you who are interested in this work will try it you will be eminently pleased with the result of the treatment. We put the patient on the table and apply plaster from the armpits down to the knee, with the thigh flexed, so that the patient is actually put up in the sitting posture. This permits us to get old people out of bed in ten hours, or as soon as the plaster hardens. You can put them in a roller chair, and one of the greatest conveniences is that the patient is able to go to stool in a normal way, and you do not have all of that trouble in cleansing the patient that you would have when these patients lie down during the period of convalescence.

We have had five of those cases in people whose ages range from 62 to 74 since the first of July, and of this number there was one woman and four men. They are all well and walking normally. They scarcely miss a meal. They never suffer any inconvenience in lying on the bed sideways or flat on the back with feet elevated, and they have none of the discomforts which come from the ordinary methods of extension and confinement. So far, all of our cases have had beautiful recoveries from this method.

DR. R. E. FORT, Nashville: If I understand the splint used by Dr. Crisler, it is the splint of Van Arsdale devised by him for the treatment of fracture of the femur in children. I appreciate Dr. Crisler's application of it to adults, as I have not seen it thus applied. With children it is ideal. After its application they can sit up in the bed, or on the floor, the functions of their bowels and kidneys can be attended to properly, they are thoroughly comfortable, and excellent results are obtained.

Unquestionably, the Hodgens' splint is superior to Buck's extension, and much superior to the application of plaster. The one great advantage in its use is the physical comfort to the patient when compared with either of the other methods. The excellent results reported by the essayists will probably divert the minds of the profession from one condition that will occasionally arise, that is, the interposition of fascia or muscle between the fragments; usually this can be made out by the lack of crepitation, but I have seen where the interposition was one-sided and crepitation was obtained, and we are thereby deceived.

If you have this condition presented, you will fail to have union, so where there is a question I strongly advise the open method and the application of Lane's plates. Of course, if you have an extensive comminution, they too should be treated by the open method. The application of the Hodgens' splint after the open treatment is ideal.

DR. GALLAGHER (closing): I want to thank you kindly for the liberal discussion. We did not contemplate that we would convert every man to our hobby, if you may consider it as such. What struck me in the discussion was that every man has an appliance of his own and he thinks that appliance is the thing. It may be so. I will not attempt to answer all of the points that have been brought out.

This splint is so extremely valuable that I do not see any advantages in putting a patient in a plaster cast to get about. They cannot walk with plaster on; they can only roll in the chair at best. To come down to the facts, if you put on plaster, they stay in bed six or eight weeks.

As to Dr. Crisler's apparatus, he puts the patient in a sitting posture, there to remain the entire time. These patients may sit up during the day, read and write, and move about in bed with the Hodgen splint, and when night comes they can lie down. Since we have been using this splint here in Nashville a good many physicians have adopted it, and they are just as ardent advocates of it as we are. They will not treat fractured femur in any other way.

I have had cases in consultation and a great

many as interne, of which I kept no record. In a previous report the results were questioned. Finally, I got some of the more recent cases and brought them here so that you may see the results yourselves.

DR. McCABE (closing): In regard to the statistics presented by Dr. Eve, they show that only three Hodgen splints were used. We anticipated just such statistics as these because the profession has not yet begun to use the Hodgen splint, and that is the reason why we read this paper before this Association today. I believe that the Hodgen splint is of value and is a splint to be used in all cases of a fracture of the femur, except possibly those situated just above the knee, in which flexion would probably throw the fragment out of position, and in that case it would be better to have the leg extended. I believe that after this splint is once taken up by the profession, it will practically eliminate Buck's extension and plaster-of-Paris.

I do not see the necessity of applying the Hodgen splint for a week or ten days; the patient has got accustomed to the splint, he can lie down or move from side to side, and you can adjust the bedpan under him. He can read or write, and I do not see the necessity of taking that patient out of the splint and putting the limb up in plaster-of-Paris, which will confine him to his back.

Dr. Crisler's idea of putting up these fractures is a good one, but he puts them in one position, so that the patient cannot move about. In this splint they can move in any direction they desire. They can move laterally, they can reach down on the floor, they can sit up and lie down and take exercise.

If there is ever a case in which the Hodgen splint is of great value, it is in compound fractures of the femur. It is also of value in compound fractures of the lower extremity. The value of this splint in compound fractures is, because you can open the wound, have a full view of it, dress it, without disturbing the fragments and without disturbing the patient. If there is any type of case in which the Hodgen splint should be used, it is certainly in compound fractures of the femur.

Dr. Cowden criticises the splint somewhat, yet he made the best argument possible for its use. He takes a young man (case 18), whom he radiographs and says, after looking at the radiograph, he does not see how it was possible without an open operation to readjust these fragments, yet it was done, and therefore no better argument can be made in favor of the splint than the one presented by Dr. Cowden.

FRACTURES OF THE ELBOW.*

By S. B. Duggan, M.D.,
Eagleville, Tenn.

Mr. President and Gentlemen:

I shall be as brief as my limited information will permit in the presentation of a few ideas upon the subject you have selected for me to discuss. I trust that I shall not be tiresome, or bore you with any of my personal hobbies or peculiarities.

I do not feel that it is necessary for me to go into details and quote various authorities or give extracts from text-books, with which you are more or less familiar.

I shall describe briefly the various fractures and complications to be met, and then I shall report a few of my own personal experiences in treating these fractures.

In fractures of the elbow we have three bones to contend with, any one of which may be the seat of fracture: First, we have fractures of lower end of humerus; of these we have the ones just above condyles; above and between the condyles; or either condyle; of either epicondyle; and separation of the epiphysis. Second, fractures of the ulna; as a rule, only the olecranon process; very rarely the coronoid. Third, fractures of the radius; of these usually the head; sometimes the neck.

I will first take up each fracture separately, and give symptoms, causes and usual methods of diagnosis, and touch briefly the complications and treatment. After outlining each fracture, I shall attempt in a summary to give something of various and different methods of treatment of such cases, and the method I myself used in the few cases, and the method I have had the privilege of seeing.

A. Supra-Condylloid, or fracture just above the condyles.

In this the line of fracture passes through the expanded lower end of the Humerus, and sometimes opens into the joint through the olecranon and coronoid fossae. It may be transverse or oblique; either laterally or an-

tero-posteriorly; in rare cases almost vertical and transverse, or, in other words, parallel to the anterior surface, and crossing the bone close behind the trochlea and capitellum.

Symptoms: The usual displacement is of the lower fragment, backward, and the injury is frequently compound, due to perforation of the skin by either fragment, especially the upper. The brachial artery or median nerve may be dangerously stretched across the end of the upper fragment. Also, when we have the usual displacement, the appearance of the region is very similar to a backward dislocation of the elbow. Diagnosis is then very readily made by paying close attention to the relations of the olecranon process and head of the radius to the epicondyles.

Treatment: Reduction is made by traction and coaptation of the parts with the elbow flexed at a right angle, or with the arm fully extended. Reduction is often very hard to do. It may be maintained by anterior and posterior rectangular splints, or by a molded posterior splint, or through extending well around to the front on both sides. Occasionally vertical suspension for two weeks, with elbow fully extended is the best treatment for such fractures, especially if compound. If we follow this method we are apt to have much less primary stiffness of the joint than is usual after treatment in flexion. If the fracture is compound we may have to resort to excision of the end of one or both fragments to obtain permanent reduction.

B. Inter-Condylloid Fracture. Sometimes called Torv fractures, differs from supra-condylar by the addition of a line of fracture running from the transverse one downward through, or between, the condyles.

Cause. It is usually caused by direct violence, as a blow or fall upon the elbow, and is often compound or comminuted.

Symptoms: It may closely simulate a supra-condylar fracture; the condyles preserving their relations with each other; or they may be widely separated with the lower end of the upper fragment and the olecranon interposed between them.

Diagnosis is made as in supra-condylar, in those which resemble it, and in other cases by reference to the position of the upper frag-

*Read before Rutherford County Medical Society, August, 1913.

ment and the olecranon between the condyles.

Treatment: Complete reduction, if possible, under anesthesia. Reduction is very difficult to obtain and more so to maintain. We are almost sure to have more or less deformity and loss of motion, hence, we should keep the limb during treatment, especially the latter part, in the position in which it will be of most use should ankylosis occur. Our method of treatment is to use a broad heavy molded splint, extending from the shoulder to the wrist, with the elbow flexed at a right angle. It should extend well around to the front of the limb, and be permitted to harden during anesthesia; this may be aided by permanent traction at the elbow in the direction of the long axis of the arm. Another treatment is to apply a padded anterior splint with the arm fully extended. This is thought to be the best means to prevent the upward and backward displacement which so often occurs. Regardless of method used, after ten days or two weeks, it is always best to flex the elbow and to change the angle of flexion from time to time, in the hope of increasing the range of motion. In compound fractures, advantage may be taken of the wound to pin the fragments together with steel pins or drills. In other cases excision of lower end of the humerus is indicated with the object of getting a movable, though often, very much weakened joint.

C. Fracture of Internal Epicondyle may be caused by direct violence or by forced abduction of the forearm. In the latter case dislocations of the elbow usually follow in consequence of the continuation of the violence and the fracture becomes a complication of the more important injury.

Diagnosis: In these cases diagnosis is made by recognition of the mobility of the small fragment with possibly crepitus also. In those in which it complicates a backward dislocation the diagnosis is made the same way; but in outward dislocation the fragment may be drawn down below the trochlea, where it cannot be felt. We then make the diagnosis by its absence.

Treatment: The usual treatment is immobilization of the joint in flexion, at or with-

in a right angle, to diminish the effect of the attached flexor muscles upon the fragment.

D. Fracture of External Epicondyle: This is very rare.

Diagnosis is made by recognition of small movable fragment at the seat of the epicondyle.

Treatment is same as for fracture of internal epicondyle—that is, immobilization and maintenance of fragment in its proper place.

E. Fracture of Internal Condyle. The line of fracture extends from a point on the inner side of the humerus above the epicondyles downward and outward into the joint at the center of the trochlea or between the center and the capitellum.

Diagnosis is made usually by the presence of a backward and upward displacement of the fragment, and though there may be only a slight displacement of the fragment, its persistence produces a very marked deformity, due to a change in the relations of the long axis of the arm and the great prominence of the external condyle.

Treatment: As a general rule good results will be obtained after complete reduction, by the use of a posterior rectangular or molded splint or a Plaster Paris dressing. It is well to examine the joint after ten days to two weeks, in order to correct the displacement if it has recurred. If the arm is kept in full extension for the first two weeks and then flexed we will usually get the best results. But there is a tendency to forward displacement or tilting of the fragment in the extended position. Perhaps the best treatment is that of extension for ten days, and then substitute flexion. In young people we often have impaired joint, due to excessive formation of callus.

An occasional complication is a backward dislocation of the radius. When this is present a recurrence after reduction is best prevented by keeping the elbow flexed at less than a right angle.

F. Fracture of External Condyle. In this the line of fracture runs from a point on the supinator ridge downward and inward through the capitellum or the outer part of the trochlea.

Diagnosis is made by displacement of the

fragment, which may be only slight or very marked. Also by outward and backward displacement of the ulna from the internal condyle, the head of the radius maintaining its relations with the capitellum and the ulna.

Treatment: The usual treatment is immobilization in a posterior rectangular splint or immovable dressing.

G. Separation of Epiphysis. This is somewhat rare. The lower fragment is usually composed of the entire epiphysis, although there may be several distinct pieces. In rare cases either or both epicondyles may be attached to the upper fragment.

Symptoms, Diagnosis and Treatment: Practically the same as those of supra-condylar fractures, with perhaps one exception in the treatment, the elbow should be fully flexed in order to prevent angular displacement.

Fractures of the olecranon process may be caused by contraction of the triceps, or by external violence received upon the olecranon or the ulna near it, the most common cause being a fall or blow upon the elbow. The line of fracture may be at right angles to the long axis of the bone in both planes, or oblique in either plane, or irregular.

Diagnosis is made by displacement of the fragment, which may be slight, the periosteum being to a great extent untorn, or the fragment may be drawn upward for one to two inches by the triceps. We also have localized pain, independent mobility and crepitus when the displacement is slight, and absence of olecranon from its proper place and its presence at a higher point when the displacement is great.

Treatment: When the displacement is slight only, and the olecranon accompanies the ulna in flexion of the elbow, the application of an immovable dressing is all that is usually needed. But if the olecranon has been drawn upward and is detached from the ulna, it is best to immobilize the elbow, fully extended, by a long anterior splint, the fragment being held in position by adhesive strips or other means. Perhaps the best and most convenient method is a v-shaped piece of adhesive plaster, with the curve on the back of the arm close above the fragment, and the sides curved down upon the forearm. Some-

times we have to expose the fragments by incision, and wire them together. Union may be bony or fibrous, and even if there is no union active extension is not entirely lost.

B. Fracture of Coronoid Process is almost unknown, except as a complication of a backward dislocation of the elbow.

Diagnosis is somewhat difficult, as there is little or no tendency to displacement, due to the fact that the only muscle attached to it, the Brachialis Anticus, is broadly attached to the ulna below, and this has to be torn loose before the muscle can draw the fragment upward. You can sometimes feel the fragment as a small movable body in the flexure of the elbow.

Treatment is usually immobilization of the joint flexed at right angle.

Fractures of Radius.

A. Fracture of Head. This occurs generally in connection with fracture of the coronoid process, as a complication of dislocation of the elbow. Hence it is rare. When it does occur it is only partial, the fragment being the inner or anterior portion of the head. The treatment is practically the same as the fracture just described.

B. Fracture of Neck. Only a few cases of this nature have been reported; also the ultimate result is doubtful. We may get bony union, or suppuration of the joint may take place.

Diagnosis can probably be made by localized pain, and by failure of the head of the radius to share in the rotary movements of the shaft.

Treatment would be reduction, if possible, and an immovable dressing.

Summary.

I have purposely omitted going into details of the methods of treatment of any of the fractures described, but I shall say a few words in regard to the after treatment of fractures of the elbow. After removal of the dressing there is always more or less stiffness of the joint. Most physicians and surgeons say, "pay no attention to this, except to encourage the patient to use the arm in the natural way as much as possible." Of course, some authorities recommend passive motion,

and I have, in my own limited experience, found that unless I did practice passive motion and massage, invariably a stiff joint, with a great deal of lost motion and impaired use, was the result. To this brief review of the treatment of fractures of the elbow, I shall add a few additional thoughts. You, of course, noticed that in giving the treatment of each fracture, I described one or two simple methods only. I did not think it necessary to give more than that, and, since there is a vast difference of opinion among surgeons in regard to the treatment of fractures in general, I tried to fight shy of trouble and to keep on top of the fence rather than fall to either side. You are all familiar with the modern theories and methods of treatment that have been advanced in recent years. Some say that the open treatment should be used in all cases of fractures, since it is impossible to bring the fragments together otherwise; others say that an X-ray photograph should be made before and after reduction to be certain that the parts are in apposition. The use of yucca or other wood-fiber splints, which are easily molded and shaped to conform to the outline of the limb, are recommended and are useful, as are also splints made of woven wire and perforated metal. When your patient has plenty of money and does not care for the expense, you might possibly use all of them. The use of steel plates and screws and decalcified bone plates are of immense value in certain kinds of fractures, and, when indicated, should be used if possible. I have seen some good results obtained in the country where there was none of the modern apparatus, and I believe better results than in some of the hospital cases where the surgeon was supposed to have everything needed. In my own experience in the treatment of fractures of the elbow, I have always gotten good results by the use of the following method:

I use splints of card board or of soft wood-fiber, easily molded. After reduction of the fracture I then apply well-padded anterior and posterior splints extending from the shoulder to the wrist, with the arm fully extended. These splints are held in place by roller bandage, or by Plaster Paris dressing in case of a child. I have never failed to get

bony union and have had no difficulty in overcoming stiffness of the joint by passive motion and massage. As a rule, at the end of ten days or two weeks, I remove the dressing, and, after examination to see if everything is in apposition, I replace the dressing and let it remain for ten days or two weeks or more, as indicated. I have never had any lost motion or ultimate impairment of the joint.

"THE GENERAL PRACTITIONER AS A SPECIALIST."

By Hy. Lockhart, M.D.,
Coalmont, Tenn.

When I received Dr. Billington's invitation to read an essay before the Middle Tennessee Medical Association, realizing as I did and do, the inferiority of the essay if attempted, I was not interested, but when reading further and noting that it was the policy of the officers of this Association to get the country practitioner interested, and realizing the truth of the assertion, that we of the country were not doing our duty to either ourselves or to our brother practitioners, I determined to make an effort, however feeble it might be, so that it might serve as an example to others, even if no other benefit should arise from it.

Coming as I do from away out in the sticks where the sticks are ticky and the ticks are sticky, where roads are bad and collections worse, where patients are plentiful, but not thick, where difficulties to be surmounted are so great that to my mind they must bring out the best there is in a man; my remarks will be directed to practitioners afflicted by and afflicting similar communities.

The subject of this talk, for it cannot be dignified by the name essay—"The General Practitioner As a Specialist"—paradoxical as it may seem, is to my mind one of the truest and most important that could be brought to the attention of the rural physician. The title will doubtless excite the wonder of my country brother and provoke a smile from

*Read before Middle Tennessee Medical Association, May, 1913.

my more fortunate city one, but to them allow me to say that to many of us it seems that the strict specialist is too prone to see only that for which he is looking. Yet full well we know his worth, his ability and power to go to the very bottom of the symptoms in his line, but is he as competent to take into consideration and properly weigh the symptoms of the disease in all its ramifications, to view it from all its angles, and to search for, and find out its complications as the man who daily runs up against a general practice and in addition has made a special study of some branch?

Having the welfare and advancement of the profession at large, individually and personally at heart, having for fourteen years daily butted my head against the difficulties of a country practice, studying myself and the profession as a whole, realizing our power for the betterment of the world, deploring our shortcomings, yet glorying in our achievements, I have come to the conclusion that our inability in the country to secure the service of a specialist or more properly speaking, just in this connection a physician who has devoted himself not exclusively, but assiduously, to some particular branch of medicine as a consultant is our worst handicap, the weight which holds us down, the drawback which keeps us from rising to the level to which our earnest endeavor entitle us.

The idea, which, so far as I know, is original with me, and which I wish to present to you is, briefly, this; for each county society to take the matter up and discuss its many advantages, which I think must be apparent to any physician who will give it proper thought, and for each member to select for himself some branch of medicine to specialize on, and if possible take a post-graduate course; if not, devote as much time as possible to it, and so far as circumstances permit and prospects justify, fit himself with the proper instruments and necessities for the reasonable practice of his chosen branch.

I am aware that in some smaller towns and thickly settled communities post-graduate courses, and to a certain extent specializing, is not so uncommon, but here is where the eternal jealousy of the medical profession

works to the pecuniary loss of the progressive man who has spent his money to learn more, and as I hope to show you, to the great disadvantage of the whole medical profession.

Too many physicians, owing to the unnecessary and harmful rivalry existing between each other, seem to fear to refer a patient to a brother practitioner, seeming to think that by so doing they are acknowledging the superiority of the consultant. Owing to this fear, and partly, I am constrained to believe, from ignorance of the many advantages to be derived from such a course, not only to the consultant and patient, but to themselves, many physicians fail to give the proper encouragement to the man who has been progressive enough to get out of the rut of common practice. Not only do they fail to encourage, but actually disparage the efforts of others to render themselves more proficient. Now, gentlemen, this state of affairs, which may not sound well, but which most of you realize to be true, is very deplorable and is the first obstacle to be removed before there is the proper incentive from a financial point of view for a physician to spend his hard-earned money to specialize in his general practice, and I hope to be able to tell you how through the county society this, the most forward step of recent times, may be taken on the part of the profession who most need it—the country physician. It is true that we of the country cannot hope to master any branch, or climb to the height attained by our city brother. The reasons for this are apparent; we do not have the proper amount of clinical material in our own practice to perfect ourselves, neither is there enough to make it a paying, instead of, as I have found it, a losing proposition, and I regret to say that the main reason is the lack of proper push and vim on the part of the practitioners themselves in not educating the public to its needs and advantages.

All these difficulties I consider can be overcome through discussion and co-operation in our county society, and to try and tell you how this can be done is my excuse for being before you and consuming your time. Get to

gether in your county society, talk the matter over, let one man choose, say, Microscopic and Laboratory work, then let all the other physicians give him work and encourage him in every way.

If you are in doubt of malaria, let him examine for the plasmodia; if of typhoid, let him do a Widal for you; if of tuberculosis, have him examine the sputa or make a blood culture test, and in this way find the white monster in time to be of some service to the patient besides smoothing the road for the bear. That this can be accomplished, gentlemen, I know with enough gratification to repay you for any financial loss sustained. Three years ago I took up this branch of work, and while the city man would smile at my methods and laugh at many of my blunders, still it is with pride that I can conscientiously say that I know of some lives saved and many diagnoses confirmed or made when otherwise they would have remained in doubt or never have been made at all.

As an illustration I will give an instance that occurred in my practice some years since that perhaps does not rebound to my glory. In a malarial country I made a diagnosis of and treated a case as malaria, but a severe hemorrhage one very stormy night, with the patient six miles away, made my diagnosis for me. Fortunately the patient lived, but listen, gentlemen, no antiseptic precautions as to excreta, etc., had been ordered, resulting in three more cases in this family and about thirty-six mile trips for me, for which I still have the good will of the family, but nothing to separate the covers of my bill book or cause the cashier any trouble. Now, what would I do; examine the blood for the organism if malaria was suspected; not being typhoid, of course, would next be thought of and a Widal done, and others if still in doubt. Is a Widal possible in the country? you ask. Certainly, and just here let me remark how true it is that necessity is the mother of invention. I use a vacuum bottle costing one dollar as an incubator with fairly good results. Enough of this; let us, as I say, talk it over in our county societies; let one talk up microscopy and another diseases of the eye. At a small expense one could qualify himself

to test eyes, fit glasses, etc., and if no more send them to the city specialist in time for an operation to be of benefit.

I will give another instance in this connection of a failure or mistake of mine—and they do say that an honest confession is good for the soul—and I sometimes think that if all essayists, contributors and journalists would devote one year to telling of their failures and mistakes that we would all derive more benefit from it than from hearing so much of our success. Be that as it may and be your mistakes few, many or none, I do make them and “He that is among you that is without sin let him cast the first stone.” The case in mind, a very estimable old lady having in youth through accident lost one eye, the other one became affected, two other physicians were called in consultation by me, and she was treated to the best of our ability and knowledge. Finally she was sent to the city where an iridectomy was performed—too late—result total blindness—reason, no one with an ophthalmoscope and the knowledge to use it so that a diagnosis could be made in time. Gentlemen, I say that such mistakes as these are a disgrace to the profession; perhaps they do not occur in any one’s practice but my own and I will not ask you to say whether they do or not, but being egotistical enough to think that there are others who know as little as I do and knowing the frailty of human nature and realizing the absolute necessity of grasping any and every aid to correct diagnosis and treatment, I am perhaps wearying you with an honest endeavor to show the country physician a way which will do away with, of course not all, but some of his mistakes. Is there not some one in every country who could easily learn to test eyes, fit glasses, etc., and thus relieve headaches due to eye strain? How many times do we as general practitioners hear the mother when we go to see some one of the family—for God bless the mothers of this land they are long suffering—but when we are through with our patient they will say in a timid way, as if apologizing for taking our valuable time, “Doctor, I have the headache almost all the time and I thought I would see if you could give me something for it.” We ask her if her head swims and she says yes.

Calomel—head no better—female troubles our next guess—uterine tonic—head no better—coal tars, dope, etc.—and the poor woman has the headache yet or the dope habit and she is indeed fortunate if not both. Perhaps the tale runs something like this, "Doctor, my little girl comes home from school nearly every evening complaining of the headache, I tell her she runs and gets too hot and that if she does not quit it I am going to stop her from school." You are in a hurry—she wasn't the one you come to see any way—calomel or artificial digestant. Again you go to see some one of the family, because such cases are not brought to you again your attention is called to the girl's headache, you suspect the real trouble and question the child more closely, she complains of the words blurring, etc. You say, madame, your child's eyes need examining and I should guess fitting with a pair of glasses; you are then asked where can this be done and by who and you, answer Doctor So and So somewhere. "Lord, doctor, you know we are not able to send her there, it costs too much," and too well you know from the looks of your ledger that such is the case, so the child goes on with aching head, burning eyes, bad lessons, and ignorant mind, a drone in school and a dullard in life and all this because some one of us have not fitted ourselves to give them the proper attention. Possibly they could pay us, but they can't and won't make trips to the city. Again, how many persons with failing eyesight buy a pair of glasses from that corner quack, some spectacle peddler, which in the very beginning were not suited to that case, still they are worn on and on and never changed until the eyes are injured more than they were ever benefited. Gentlemen, can you not see that they would soon all come to you were you qualified to do such work and was recommended by your fellow practitioners and the public was educated.

And yet again let some of your county societies specialize on diseases of the skin. How many of the profession today could differentiate between, say, Keratosis, Pityriasis, Cutis Anserina and Pityriasis Rubra Eczema, Papulosquamous Syphilide, Seborrhea Capitis, Seborrheic Dermatitis, Pityria-

sis Rosea, Lichen Planus, etc. I can't. A case illustrative of this, but this time the joke is on the other M. D. Once during an epidemic of smallpox I placed a lady who had previously had an eruptive fever diagnosed as smallpox in charge of a case—result a very sick nurse is about twelve days, correct diagnosis not made for several days, more exposures and contagion, the nurse evidently having had a very virulent case of chickenpox. Had there been some one handy who had made a specialty of this a correct diagnosis would have been made in the beginning and a very confusing and dangerous situation avoided.

Fellow physicians, there are many special fields for study, Neurology, Psychotherapy, Genito-Urinary Diseases, Electrical and X-ray work, and so on, but doubtless what I have said and from your own experience you realize the great importance of such a state of affairs, namely, the presence in every community of some one devoting himself not exclusively to some branch, but some one who has reached out ahead of those in his particular community in that branch to whom we can turn with some hope of gaining knowledge and the relief of doubt ourselves and benefit incalculable to our patient.

Perhaps all this may sound out of place to you of the city, but to you let me say you have solved the problem that now confronts us, namely, the mastering of a certain branch of medicine, you with your trained specialists and laboratories to call to your aid in difficult cases cannot realize how we of the country are handicapped for want of these facilities. Well we know that this is the day of the specialist and it is well that this is so, for from them must come our advance and to them must we look for guidance.

I know there are many here, who like myself, on looking through our journals or hurriedly snatching time to consult some recent work are overwhelmed by the great advance being made in all branches of medicine and depressed by the knowledge that we cannot master it all. All honor to the (if I may so call him the special specialist), but pardon me when I say a word in praise of the gen-

eral specialist who is trained in the hard school of a general practice, who can be so competent as he to give you aid in the particular ease in which he is consulted, to weigh all the symptoms, view all the side lights, and grasp the situation as a whole?

Having discussed, as I think, at sufficient length this "consummation devoutly to be wished" it only remains to be seen if this can be accomplished, and if so, how? The proper and only place, as I have intimated, is your county society; take it up there, lay aside all petty prejudices and unworthy rivalries, get on the broad high plane of modern medicine, help one another and be helped. Let each physician send all cases that are obscure, instructive or interesting to the one who is engaged in that line of work and in this way you will not only furnish clinical material so that the "general practitioner specialist" may further perfect himself in his branch, but you will learn from him things which would cost you long study and great effort if ever learned at all. Not only this, but your patient would be pleased and benefited, and last but not least, you would not only get your fee, but the consultant would get his, and "when in the course of human events" he was called to see a case in your line he would consult you. Here, he would get his fee, you yours, and instead of cutting any one's practice down, all would be built up; instead of losing money, more would be made. It would be medical reciprocity of the most beneficial kind, to use an old and worn but expressive slang expression it would be a case of "you tickle me and I'll tickle you." All this is said with due consideration to the welfare of the patient who is one of the interested parties in any arrangement of this kind, but I think it goes without saying that they would be the greatest gainers, deriving the greatest benefit from this arrangement and upon them would devolve the duty of paying for the better service, and gentlemen, it has been my observation that speaking in a general way, people are willing to pay for what they get and can't be blamed for kicking when they pay for what they only expect. This plan is feasible and practicable only by co-operation, by the profession standing shoulder to shoulder, by each

lending a helping hand. Should only one or two men try this and the others instead of aiding them should throw obstacles in their way they would surely be sitting in a losing game viewed from a financial point of view; then the love of their work and the knowledge that they were at least in the one thing above those around them would be their only recompense. Perhaps some might urge against this plan that the country practitioner could not as the city man perfect himself true and granted, and that patients would thus be kept away from the more competent man not granted, and I do not believe true; in the first place, most of the cases seen by this country specialist would or could not go to the city expert, and in the second place, all who could would go the sooner if necessary, from the simple fact that their condition would be the sooner diagnosed and the need of still more skilled treatment realized. So instead of the patient suffering in this way they would receive additional safeguards and the true specialist instead of losing either money or patronage would gain in both. This, then, gentlemen of the Middle Tennessee Medical Association, is my message to you; get together, work together, pull together, fight together, instead of getting apart and fighting each other rather than join forces in the common cause.

All join hands through your county societies and lead and lift each other out of the too deep rut of the present up-step and steep cliff and height of the hard road which leads to the broad plane above where the bright light of progressive, modern medicine ever shines to show the way to still other achievements. It is for but few of our profession to write their names so high that a world may pause to read, to so trim our lamps of knowledge that a nation may stop to gaze, to be so gifted by genius and attainments that a people will pause to listen when we speak, but each one can be to his humble community what few can be to many communities.

Each one of us by work and study in some branch can be to his community what a Savage or Wood is to Tennessee; each can be at home what an Eve is to this State, and a John B. Murphy is to the United States; each can

occupy the envious height out in God's grand, green country that is occupied in our own sunny South by a Wm. Litterer or in the world by an Alexis Carrell. It's up to us.

NASAL POLYPI.*

By I. A. McSwain, M.D.,
Paris, Tenn.

After an examination of the nose of a patient and finding polypi present one naturally wishes to know whether or not a polypus is an inflammatory product and must be regarded as a symptom such as dropsy, or whether it is a neoplasm with the characteristics of any other new growth of unknown origin with no known function.

Certainly a search in the works of higher authorities fails to give one a positive answer, some maintaining that polypi are due to a purulent discharge from an inflammatory process found in either the ethmoid, sphenoid or frontal sinus or the antrum of Highmore, while the experience of others, whose opinion must be equally respected, teaches that the tumors are primary to the infection. However, all are agreed that a myxoma or a nasal polypus is usually a pedunculated connective tissue tumor most often found growing from the middle turbinal body, the uncinate process, or ethmoid cells, although one sometimes finds them attached to the floor of the nose.

My observation obtained from private practice and that of my connection with the Ear, Nose and Throat Clinic of the University of Tennessee has been that they are usually associated with an infection of one or more sinuses. Also the fact that negroes are less prone to suffer from this malady than whites, for of the many hundreds of them that I have examined and treated in the Clinic suffering from an infection of one or more sinuses in not one instance have I discovered the presence of a polypus. The subject is not mentioned in the text-books and may be a coincidence, but in view of the fact that so many were examined and treated it does seem pass-

ing strange that there was no evidence of this malady. However, I mention it for what it is worth.

The tumor is undoubtedly formed by an inflammatory exudate occurring beneath the mucous membrane. Stasis then takes place in the vessels, with a transudation into the tissue, with the result that a polypus is formed. Some polypi are hard and fibrous and others soft, they are usually multiple and one is amazed at the size and number. Dr. Loeb, of St. Louis, reports having removed 308 at one sitting. Heat or cold has little effect upon them, but they are very hygroscopic in character, and on rainy days or during moist weather they increase in size to the great discomfort of the patient.

Of the two varieties sessile and pedunculated, the latter is usually the most common and are more easily removed, while the former are more prone to recur and become sarcomatous.

Ill health if associated with this trouble to any marked degree is usually due to the consequences of nasal occlusion with attendant mouth breathing, causing an irritation of the pharynx, bronchial tubes, etc.

Repeated attacks of coryza, also the lodgement of a foreign body remaining for some time have been given as a cause of polypi.

The presence of this growth in the nose is manifest in many ways, the patient's attention being attracted frequently by many colds. No sooner does one attack come to an end than another follows closely on the heels of the first. However, the location has much to do with the symptoms.

If pedunculated and hanging in the lower portion of the nose a sensation of a movable foreign body is felt, the patient sniffs and blows it back and forth at will.

If sessile it cannot be moved and causes a feeling of tightness and fullness across the bridge of the nose, and if situated high up in the nasal tract may cause pressure on the nasal duct with resulting eye symptoms. Frequent headaches and very often extreme dizziness, especially when stooping, is one of the first symptoms complained of, but to the specialist the most characteristic symptom, and often one by which he makes a diagnosis be-

*Read before Middle Tennessee Medical Association, May, 1913.

fere the patient has begun to unburden himself of his many troubles is his peculiar voice. There is an entire loss of nasal resonance, giving a peculiar nasal twang that no other obstruction of the nose exactly simulates.

The function of the olfactory nerve is very quickly effected, the power of smell is greatly impaired and often totally obliterated, the size and number of the growths, of course determining the extent of lessened olfaction.

Of the reflex manifestation of this trouble, cough and asthma present themselves most prominently, the cough is sometimes very severe, becoming especially so on account of the patient's inability to breath through the nose, which always causes a chronic pharyngitis. This condition, associated with the reflex cough, keeps the throat in a chronic state of irritation.

The higher the tumor is situated in the nasal tract the more prone is the patient to develop asthmatic symptoms.

Ballanger and others report the cure of patients so sorely afflicted with this trouble that they were compelled to sleep sitting up for three months at a time. The relief of cough and asthma was instantaneous after complete removal of the growth.

The treatment of the condition lies wholly in the field of surgery and procedure less than the complete removal of the growth by surgical interference is an absolute waste of time.

Not only is the growth to be removed, but the point of attachment and to a considerable extent the parts adjacent to it are also to be obliterated; in fact, it is sometimes necessary to remove a part or all of the middle turbinate together with ethmoid cells in order to erase the diseased structure producing the malady. If the parts to which the growth is attached is not badly diseased, cauterization after removal is all that is necessary. It is needless to state that all associated sinus involvement must be treated and cured in order to prevent a return of the polypus.

In conclusion I wish to remind you of the enormous size to which the growth can attain. A few months ago a young man from a small town in Arkansas presented himself for treatment for a nasal trouble. On examina-

tion I found the right nostril completely occluded. Judging from the external appearance of his nose I had expected to find not less than fifteen polypii present, the anterior one was presenting at the ala of the nose. By use of the laryngeal mirror I detected the posterior one protruding three-quarters of an inch in the naso pharynx. After the operation was over and all polyoid tissue removed I had snared only three.

A PLEA FOR INTUBATION.*

By J. M. Clack, M.D.,
Rockwood, Tenn.

The object in presenting this very brief paper is not to instruct any one present in the technique of the operation, but to urge its performance in every case of laryngeal stenosis in which it is applicable, and before resorting to tracheotomy. It would be worse than useless for me to attempt a description, as the text-books have that from Dr. Joseph O'Dwyer, to whom the world is indebted for this life-saving operation, which transforms a death-bed scene immediately to one of delight and recovery in a very large number of instances. We were taught since the introduction of antitoxine that tracheotomy was practically abandoned as a primary operation for the relief of membranous laryngitis, it being resorted to only in rare cases after intubation had failed to give relief.

But within the last few months I have had occasion to inquire of a large number of surgeons, general practitioners and throat specialists, located in different parts of Tennessee, in regard to operative measures for laryngeal stenosis, and many of them have never had occasion to employ intubation, preferring tracheotomy instead; others have intubated unsuccessfully and abandoned it for tracheotomy. These men consulted are of good standing in their different communities, and it is simply this that brings me to discuss this procedure here today.

*Read before a joint meeting of Roane, Morgan, Anderson and Loudon County Societies, at Oliver Springs, Tenn., September 18, 1912.

The men of our county (Roane) are all, as far as I am able to learn, in favor of intubation, and are not responsible for this subject being discussed. It is not very difficult if one has had previous practice on the cadaver. Without this one will seldom succeed. About the only objection of much force urged is that asphyxia may be produced by crowding down loose membrane into the larynx. This occurred in one of my cases, but is a very infrequent accident.

The advantages over tracheotomy as given by Dr. O'Dwyer himself are conceded by most of those who have had any considerable experience in the operation, viz:

"(1) It is simpler, quicker, and adds no danger to the original disease.

"(2) There is no shock or hemorrhage.

"(3) No anaesthetic is required.

"(4) No fresh wound is made which may prove an avenue of infection.

"(5) It gives an opportunity for a better expulsive cough, which is of great value in dislodging false membrane and mucus.

"(6) There are usually no objections on the part of the parents to be overcome, a point of great importance.

"(7) The air is warmed and moistened as it is normally by passing over the nasal and buccal mucous membranes.

"(8) No skilled after-treatment is required.

"(9) In infancy, all who have had experience with both operations, admit the great superiority of intubation.

"(10) The intubation tube can be dispensed with earlier than the tracheal canula, and also with much less difficulty.

"(11) If tracheotomy is subsequently required, the operation may be done upon the tube as a guide."

Somewhat contrary to the above stated advantages, Bishop, on page 470 of his textbook, gives the following:

"Tracheotomy is easier to perform and can be done in extremities without skilled assistants. If the tube becomes clogged the nurse can prevent suffocation by removing it and maintain the opening free until the surgeon

arrives. In these respects tracheotomy presents advantages over intubation."

"In cities where skilled laryngologists are within quickly-calling distances intubation possesses superior merits. In the country, with all its unavoidable disadvantages, tracheotomy is hardly likely to be superseded."

The results depend upon the disease that the child has, for nothing can be claimed, but simply one danger is removed—that of asphyxia from mechanical obstruction of the larynx. We can understand why a few deaths in a neighborhood after the operation would bring it in disfavor with the laity, and the physician who has not had successful experience is prone to go with them and give up the fight for life before reaching the last ditch. To sit down with folded arms and make no attempt is nothing short of criminal neglect.

All experience teaches me to favor intubation as the primary operation. It is prompt, efficient and certain, and without the many dangers and objectionable features of tracheotomy; while at the same time it does not deprive the patient of any essential advantage afforded by tracheotomy.

Early operation, before general cyanosis occurs, will increase the percentage of recoveries largely, and is almost without danger if properly performed, as we will seldom find loose membrane at this time.

MARRIAGES.

Thursday afternoon, December 25th, at 4 o'clock, in the presence of a few intimate friends, Mrs. Mamie Brown and Dr. L. S. Pritchard were quietly married. Dr. Pritchard is a rising young physician, formerly of Johnsonville. Dr. and Mrs. Pritchard left immediately for an extended Southern trip, after which they will be at home in Only.

The section on Malaria Eradication of the National Drainage Congress will be held in Savannah, Ga., during 1914, the date to be announced later. Membership and co-operation are earnestly desired. Full information can be had from Dr. Wm. H. Deaderick, of Hot Springs, Ark.

THE JOURNAL

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Devoted to the Interests of the Medical Profession of Tennessee

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EDITORIALS**1914 GREETINGS.**

Time and space are two things that have no limit; they are infinite—incomprehensible to the human mind. That time should be divided by the movements of the bodies of the solar system and thus give us days, weeks, months and years, shows the craving of the human mind for something tangible, definite. And so we have come to the end of another year and begin the round of a new one—a starting point for our affairs, material and spiritual.

The dying of the old year should give us pause and cause us to reflect on the joys and sorrows, the hopes and fears, the aspirations and ambitions realized or lost, in the year that has gone before. Memory will come and be our sweet-voiced guest guided by Experience, the greatest of teachers; and in the contemplation of days that are gone we will find pleasure in our musings and mental guides for our future course.

So at the advent of the New Year we wish you happiness; we wish you much work, for happiness is not to the idle; we wish you wealth and prosperity, temporal and spiritual; we wish you another year of fruitful activity in our chosen profession.

THE ITINERANT QUACK.

The man who comes to the small town with a cheap stock of shoddy clothes, rents a store for a few days or weeks, and by means of flamboyant advertising disposes of his worthless goods to the "suckers" of the locality is looked on by reputable business men as a detriment to the community. Decent men of the town recognize that while the owner of the store rented and the proprietor of the

local newspaper may make a little money out of the visit of the fly-by-night merchant, the town as a whole is the worse for the visit. So generally is this admitted that most towns and villages impose a heavy tax on undesirable citizens of this type.

The itinerant quack bears the same relation to the community as the transient clothing-store proprietor, with this difference: while in the one case the unsophisticated are relieved of their money without getting value received, in the other they also run the risk of losing their health as well. The business men of country towns, however, do not so easily recognize the harm that the traveling doctor does as the damage that the traveling merchant causes. One reason for this, of course, is the fact that the traveling quack is not a competitor of the local business man. Should the local physicians protest, their objections are discounted on the ground that it is a case of "professional jealousy." Rural towns, however, are gradually waking up to the fact that the visit of the itinerant doctor is just as much a calamity as the visit of the itinerant merchant. And, naturally enough, the editors of the country newspapers are among the first to call public attention to this fact. We say naturally, says *The Journal of the American Medical Association*, because the men editing the country newspapers are, as a class, among the leaders of thought in their communities. From a selfish point of view, the local newspapers might be expected to be the last ones to have anything detrimental to say about the class that brings in a handsome advertising revenue.

The *New Teller* is published at York, Neb. It received an offer of an advertisement from a Dr. A. A. Potterf of Kansas City, who was going to pay a visit to York in the hope, doubtless, of catching some persons who think that their home physicians know less than traveling quacks. Of course the editor did not know that Dr. A. A. Potterf was a graduate of a low-grade school that is now out of existence; that while the doctor has been practicing medicine for a quarter of a century he is so little known in his home town that reputable physicians of Kansas City have never heard of him. The editor of

the New Teller did not know, and could not be expected to know these things; but he did know that physicians who are above the average in knowledge and skill do not go quack-ing it around the country. Knowing this, the New Teller published the following open letter on the front page of its issue of July 30. It is worth reading:

"Dear Doctor:—Your ad. copy and express money order received. We regret very much that you contemplate another visit to York in the near future. We regret just as much not being able to keep the money order—it looks good to us. However, the New Teller has managed to struggle along several months without any such advertisements. We are mercenary enough to indulge in the hope that you will file your certificate with the county clerk, and pay the small fee required by the law, though this little matter is as a rule neglected by the traveling fraternity of your calling.

"Owing you no personal enmity, we can't help expressing the wish that the city of York might find some way to benefit by your stay in this city to the extent of at least fifty dollars a day. Not so long ago, an itinerant peddler might rent a store-room in York, put in a cheap stock of overalls, gilt watches, and in the course of ten days wind up with an auction sale. This proceeding would now cost him too much.

"You may be a good doctor—a most excellent doctor. As such you might build up a lucrative practice in Kansas City and be saved the toils and hardships incident to constant traveling. (A delightful piece of sarcasm.—Ed.) There are already many good doctors in York—plenty, in fact. As they make their homes here, the people have a fair chance to judge them. The people don't have a fair opportunity to become acquainted with you. We believe this community would be as well off without the visits of 'United Doctors,' 'Doctor Specialists,' and the like, and have said so in a variety of ways. We believe the person with defective eyesight should consult an oculist, rather than patronize a spectacle peddler. If peddlers we must have, let them aid materially in cutting down the heavy burden of the taxpayers. Very respectfully,

THE NEW TELLER.

"The above letter also applies to 'The Old Reliable State Medical Institute' of Omaha, which forwards ad. copy under date of July 29, announcing a three days' visit to York. The Institute may be old and it may be reliable. It may be several other things. It should be remembered that a quack doctor

is more dangerous and vastly more expensive than patent medicines. The public is now protected to a certain extent against the latter."

Could the facts be stated more simply or more accurately? A letter like this makes the readers of the newspaper think, and quackery cannot thrive among people who think! Some day it will dawn on the public generally that the doctor who can treat any kind of ailment a little better than the general run of doctors does not need to spend money advertising that fact, nor is it necessary for him to assume "the toils and hardships incident to constant traveling!"

POST-MORTEM.

It is said that physicians in America are allowed post-mortems in the proportion of one to eight hundred as compared to England or the Continent.

This condition should not be allowed to exist much longer, and we would urge our legislative committee to get busy in passing such laws as will enable those so inclined to do more work of this kind.

Cabot's findings in four of America's largest hospitals showed the percentage of correct diagnoses to be 60 per cent, 47 per cent, 78 per cent, and 71 per cent, and in one hospital where 200 cases were examined, the autopsy showed that 133 were rightly diagnosed, 43 had a wrong diagnosis, and in 24 no diagnosis was made. Professor Orth, of Berlin, claims that in 17 per cent of cases operated for appendicitis, it is found sound and healthy.

Prof. Cabot, in reviewing 3,000 autopsies, found many important diseases in which a correct diagnosis fell below 50 per cent.

The profession, knowing the necessity for, and the importance of thorough painstaking post mortem work, should make an organized effort to educate the public to the necessity of holding an autopsy, and should especially try to disabuse their minds of the horrors of mutilations, etc.

We are thoroughly convinced that the county societies could do no more important work for the coming year than to undertake a more systematic and complete effort along these lines.

EDITORIAL NOTE.

Doctors are prone to forget themselves in the stress of business and professional engagements. We are constantly answering the demands made upon us, often for trivial affairs, by the sacrifice of much needed rest, to say nothing of recreation. It is a duty, however, which we owe ourselves, as well as our clients, to remember that the meetings of the State Association furnish us with rest, refresh our minds medically, help to keep us abreast with the latest advances in our profession, and afford us an opportunity to renew old friendships and enjoy the society of our fellow practitioners. The meeting of the State Association should be an occasion to which every member should look forward with pleasure, and they should make every effort (even at the sacrifice of a few calls) to attend. The men who are really interested in medicine, and who attend the local medical society, as well as the meetings of the State and National Associations, are the ones, usually, at the head of the profession in their respective communities. We may not think so, but the public know, and approve, of their doctors going off to attend medical meetings.

Make your arrangements to attend the State Society at the next meeting in Memphis, April 7th, 8th and 9th.

The Committee on Scientific Work has again decided that it is useless to send out a circular letter to the 1,500 members of this Association, requesting papers for the next meeting, which occurs at Memphis, April 7-8-9. The committee take this means of inviting the members to participate in the meeting. Please bear in mind, therefore, that this is your notice, and that you will not receive a circular letter asking for a paper. Be kind enough to send the title of your paper to the Secretary, as the program is now in course of construction.

The meeting gives promise of being the best attended and most interesting we have ever had. Make your arrangements to attend. The Committee on Arrangements have already engaged quarters, and prepared an

entertainment for the second evening of the meeting, which will surely be enjoyed by all. Again, let us insist that you send in the title of your paper, and make every arrangement to attend.

News Notes and Comment

Did you do your Christmas shopping with our advertisers?

Make early arrangements to attend the next meeting at Memphis, April 8, 9 and 10.

Dr. Isadore Cohn, of New Orleans, addressed the Davidson County Society at their regular meeting Tuesday, January 6th.

The Committee on Arrangements are making plans to give the Association a "rousing reception" at the Memphis meeting in April.

It will be of interest to the many friends of our distinguished President to learn that he and Mrs. Haggard have adopted a baby daughter.

Dr. Walter Dotson announces the opening of offices in Nashville, specializing in eye, ear, nose and throat. Office, 159 Eighth Avenue, North.

Amongst the many good resolutions which you made on New Year's, we trust that you resolved to aid the Association. Bring in just one new member and see how quick we shall grow.

The Twelfth International Congress of Ophthalmology will be held in St. Petersburg, Russia, from the 28th of July to August 2nd, 1914, of our calendar (10th of August to 15th of August, Russian calendar). Full particulars may be had by writing to Dr. W. H. Luedde, St. Louis, Mo.

Under the auspices of the Georgia Surgeons' Club, a sixty days' tour of the surgical clinics of Europe is being arranged for representative Southern surgeons, to wind up

at the meeting of the Congress of Surgeons of North America in London the latter part of July, 1914. Those interested may secure details of the trip from Dr. R. M. Harbin, Secretary-Treasurer, Rome, Ga.

Dr. Williard Wood, of Nashville, visited in Sparta during the holidays.

Dr. George M. Burdette, of Lenoir city, who has been ill for the past few weeks, we are pleased to announce is much improved.

Dr. W. B. Cantrell, of Cassville, has been confined to his bed for a few days, the hope being entertained that he will soon be out again.

Dr. O. W. Hill and family, of Knoxville, Tenn., spent the holidays in Sparta with his parents, Hon. and Mrs. L. D. Hill, returning to his work last week.

Dr. Howard Curtis, of Algood, was a visitor to the Journal Office in January. We regret to learn of his loss by fire of his home and entire contents, only partially covered by insurance.

Dr. Milton Tharp, of Nashville, visited Dr. S. S. Marshbanks and wife of Sparta during the holidays, and it is reported that he made quite a hit with some of the young ladies of that city and Cookeville, and we are informed that he is thinking seriously of locating at one of the above places.

At the meeting of the Loudon County Medical Society, on January 12th, Dr. J. G. Eblen was elected President, Dr. W. C. Ellis, Vice-President, Dr. W. T. Foute, Treasurer, and Dr. T. J. Hickman, Secretary. A number of interesting cases were presented and all members present indulged in an interesting discussion.

Dr. J. A. Witherspoon, President of the American Association, spoke to a large audience of physicians, ministers, and social workers, January 13, at the Vine Street Christian Church, in the interest of Public Health. Dr.

Witherspoon took as his subject "The Necessity of the People Co-operating with the Physician in maintaining a Healthy Community."

Dr. Louis Levy announces his removal to suite 1013 Central Bank Building, Memphis, Tenn.

The annual banquet of the Chattanooga College of Medicine and Hamilton Medical Association was held January 9, and was attended by nearly all the physicians of the city and county, besides a large number of prominent men. Addresses were made by Hon. H. Clay Evans, Dr. W. F. Powell, Father Sullivan, Judge M. M. Allison and Judge Nathan Bachman, besides a number of doctors.

Dr. W. P. Robinson, a representative of the State Board of Health, who is now in East Tennessee investigating the hookworm disease, has just rendered his report for the last eight weeks on his work in Cocke County alone. The report shows that 2,490 cases have been examined, and 999 cases of hookworm found. Of these examinations 1,401 were school children, and 800 of these showed hookworm infection.

Frank, the three-year-old son of Dr. W. C. McCannon, of Knoxville, died January 1st from injuries received when the automobile driven by his father ran over him and crushed his little body. The lad was riding from the garage to the street, as was his daily custom. He fell from the step as he was about to alight and landed between the front and rear wheels. Before the father could stop the machine the rear wheel had passed over the child's body. The father carried him into the house, not realizing the extent of his injuries. We extend our heartfelt sympathy to Dr. McCannon.

The meeting of the Southern Surgical and Gynecological Association, which was held in Atlanta, Ga., December 16th, 17th and 18th, was one of the most successful held by that Society. Dr. John W. Long of Greensboro, N. C., was elected President. The Vice Presidents for the ensuing year are: Dr. A. C.

Scott of Temple, Tex., and Dr. J. F. Mitchell of Washington, D. C. Dr. LeGrande Guery of Columbia, S. C., was re-elected Treasurer, and Dr. W. D. Haggard of Nashville was re-elected Secretary. The next meeting will be held in Asheville, N. C., December 15th, 16th and 17th, 1914.

In a suit brought by Miss Wallace, a graduate nurse of a private infirmary of Nashville, against the Nurses' Examining Board of Tennessee, in which the plaintiff sought to procure a license as registered nurse without examination, Judge G. N. Tillman, in the Third Circuit Court of Davidson County, rendered a judgment in favor of the plaintiff. The point at issue was whether the Board could dictate the training requisite for application for a license. It is said an appeal will be taken to the Supreme Court.

To multiply by two the medicinal efficacy of a powerful diastasic ferment is a notable accomplishment. And that is what scientific investigation has done for Taka-Diastase. The result, as may be presumed, was not achieved at a single fortunate stroke. It was the culmination of years of study and experimentation. The story is briefly told on another page of this issue of the Journal of the Tennessee State Medical Association, over the signature of Parke, Davis & Co. It bears this caption: "We Have Doubled the Strength of Taka-Diastase." The reader is advised to turn to this announcement, which should prove of interest and value to every practitioner who faces the problem of amylaceous dyspepsia.

A word here with reference to the therapeutic application of Taka-Diastase may not be amiss. The product may be prescribed with advantage in the treatment of any pathological condition in which the salivary digestion is inhibited or impaired; in any case of gastric or intestinal disorder in which the starches are digested with apparent difficulty. It is employed with good results in the dietetic treatment of subacute and chronic gastritis; in infantile diarrhoea, especially in cases in which the diarrhoea alternates with constipation; in malnutrition or inanition; in the vomiting of pregnancy; in diabetes due to pancreatic disease.

County Society Proceedings

WASHINGTON COUNTY.

The Johnson City and Washington County Medical Society met in its regular session, after the reading of the minutes of the previous meeting and the same being approved, the following members answered to their names as present: Drs. H. D. Miller, Randall, Dulaney, Arnold, Broyles, Matthews, Kennedy, Cass, Sells, Long and Cox. Dr. Arnold reported a second attack of scarlet fever in a young man he treated for the same disease thirteen years ago, the first he had ever seen in the same individual; the case was very marked in both. Exaggerated reports as to the number of cases of diphtheria have been going the rounds without any authority to base same upon.

The question of carriers of contagion was brought out by Dr. Arnold. He recited case after case where the infection of scarlet fever had been carried to different towns by people taking their children with the rash and some in the exfoliation stage. He believes that the trains had become the hot beds of infection, and urged the close observation of officials to remedy the condition.

Dr. Miller reported an interesting skin case and, as diagnosed by Dr. Miller himself, was one of Pityriasis Maculata. The eruption first made its appearance on the dependant parts of the body, nates and flexure areas, but has since invaded all the body except the hands and face. After the beginning eruption coalescence took place and areas became solid or confluent. The history of the individual does not find any venereal infection or presence of any family history which would give suspicion of cause. The case has steadily progressed in the face of treatment and all absence of any constitutional derangement, and no discomfort from the eruption only the itching when in bed. This condition began about the 1st of November and at this time was invading other portions of body rapidly. Arsenic and different ointments and lotions have been pushed, with no relief as yet.

At this juncture, Dr. Broyles, the essayist

for the evening, gave to the Society a very interesting and valuable paper on "Trachoma." The Society passed a resolution thanking the Doctor for his very literary and useful paper and ordered it published in the State Journal.

The Medical Defense question came up for a lengthy discussion and the same was put before the Society by motion offered by Dr. Matthews, and seconded by Dr. Arnold, that this Society go on record approving same, which, after discussion, was adopted by a unanimous vote. (Provided that it does not in any way affect the individual membership in the State Society of those who do not wish to avail themselves of the relief asked in same.)

After the discussion of the new State law pertaining to the correction of the wide abuse of the habit-producing drugs, the Society entered into the election of officers for the ensuing year, which resulted in the election of Dr. R. W. Dulaney, of Jonesboro, President; Dr. H. M. Cass, Vice President; Dr. J. W. Cox, Secretary and Treasurer; Dr. E. A. Long re-elected as a member of the Board of Censors.

Upon motion of the retiring President, Dr. H. D. Miller, and seconded by Dr. Matthews, the incoming President, Dr. Dulaney, is to address the Society at its January meeting upon some topic of "Professional Etiquette."

After many eulogistic remarks upon the efficient work done by our Secretary of the State Medical Society, Dr. Perry Bromberg, the Society adjourned after one of the most enjoyable sessions of the year, to meet the first Thursday in January, 1914, at which time it will be expected that every member comes prepared to pay dues to the State Society.

The Johnson City and Washington County Medical Society met in its regular monthly session and was duly called to order by the incoming President, Dr. W. R. Dulaney, of Jonesboro. Those present were: Drs. Long, Matthews, Kennedy, West, Randall, Broyles, Arnold, Cass and Cox.

Minutes of the December meeting were read and approved. Dr. Dulaney at this

juncture addressed the Society in a few well chosen remarks in behalf of good fellowship and faithful attendance at the meetings of the Society, and hoped for a greater interest under his administration, reminding the members of their faithful work and attendance the last year.

Under the head of report of clinical cases, Dr. Long reported a second attack in the same individual of scarlet fever with well pronounced symptoms. Dr. West reported an eruption resembling scarlet fever in the mother of a child who had the disease, which eruption appearing on the extremities only, as a punctuated scarlet rash. It has lasted for six weeks and not yet well. There is no desquamation in the case and no constitutional disturbances; no diagnosis made.

Dr. Long reported a case of recurring facial erysipelas in the same person some four times, and the question was raised by the Doctor as to the possibility of the infection being dormant in the woman, and these attacks were exacerbations due to the harboring in the individual of the specific germ of the disease, or was it the susceptibility of the person?

The question of serum treatment as a curative measure came up for a lengthy discussion, with the advice of the members of the Society to avail himself of the latest method of its use in such cases.

The uses of bacterins and serums came up for a lengthy discussion, with reports of cases treated. Good results from the uses of the Acne-Bacterin (Comb) was reported by Dr. Cox, in one case which had received the injection since Nov. 30th at intervals of four days to the present time; in all, 750,000,000 bacteria had been used. The case is one of Acne-Vulgaris. Great improvement has resulted. After the second injection no new pustules appeared and the indurated skin has rapidly disappeared. The treatment from this date will be one injection every seven days of 125,000,000 bacteria, with the expectation that within one month the case will be relieved and the treatment discontinued. He also reported remarkably good results in a case of puerperal-septicemia malignant by the use of Antistreptococic Serum, using 20

C. C. every six hours, with a decided improvement; in all, eight injections (in the nates) were used, and the distressing condition was relieved and the woman made a speedy recovery. This case had been of one week's duration, with a temperature ranging from 104 F. to 105 F., with slight delirium and great anorexia-tympania, rapid, weak heart, emaciation and clay-colored skin. Other than alcoholic baths and enemas, no other medication than the serum after the beginning of its use.

Dr. Long reported several cases of relapsing typhoid fever, and was in a quandary why he should have had so many cases. It was thought that probably the Doctor had not had the support of his nurse and family in carrying out his directions as to exercise and feeding, new invasion of glands probably due to errors in diet and nursing were suggested as the causes for his relapses.

The question of bowel antiseptics and bile infection was discussed by Drs. Randall, Dulaney, Cass and Cox.

Medical defense proposition came up for final action, and upon the motion by Dr. Matthews, and seconded by Dr. Randall, that this Society go on record endorsing same, was unanimously carried.

Committee on the new drug act continued to February meeting.

The vital statistic law came up for discussion. Drs. Arnold and Matthews read letters from Dr. Lillard, Secretary Board of Health, and Dr. Shoulders, Secretary of Vital Statistics, regarding medical men for local registrars where the same were available. And inasmuch as the local registrar for the town and district of Johnson City, Tenn., was not a physician, it appeared strange that such a course should have been pursued. It was moved by Dr. Matthews, and seconded by Dr. Broyles, that this Society go on record in protest of the appointment of laymen, instead of medical men, where medical men are available for local registrars of vital statistics. Unanimously carried, and the Secretary of this Society was instructed to send a copy of this resolution to Drs. Lillard and Shoulders.

Dr. Cass, essayist for February meeting, subject, "Sapraemia vs. Septicemia." The

Society adjourned to meet again Thursday night, February 1st, at 7:30 o'clock, at the Secretary's office.

J. W. COX, Secretary.

MACON COUNTY.

The Macon County Medical Society met Friday, December 19th, the following members being present and paying their dues for 1914: Drs. H. M. Allen, J. T. Carman, Paterson East, D. M. Ford, J. Y. Freeman and D. D. Hauser. Dr. H. M. Allen read a very interesting paper on "Pneumonia and Its Treatment," which was an especially appropriate subject to discuss at this season of the year, as pneumonia is quite prevalent in this district. At our next meeting, Dr. J. T. Carman will read a paper on "LaGrippe," and Dr. D. D. Houser on "Mastoiditis."

This meeting being a called one, the members in attendance were few, but great interest was taken in the meeting.

J. Y. FREEMAN, M.D., Secretary.

HAMBLLEN COUNTY.

The Hamblen County Medical Society met in regular session Tuesday, December 9th, with the President, Dr. H. G. Pangle, in the chair. The following members were present: Drs. H. G. Pangle, W. G. Ruble, C. T. Carroll, Jr., D. E. Shields, T. E. Bulls, S. M. Ryburn, J. B. F. Dice, J. F. Campbell and P. L. Henderson.

The following officers were elected for the year 1914: Dr. R. M. Ryburn, President; Dr. P. L. Henderson, Vice President; Dr. C. T. Carroll, Jr., Secretary and Treasurer. Dr. H. G. Pangle was elected member of the House of Delegates of the Tennessee State Medical Society. Our meetings for the ensuing year will be held in the Board of Trade rooms.

Following the election of officers there was a general discussion of several live subjects.

We expect 1914 to be a banner year, and we shall expect every member to attend the meetings and take part in the discussions.

C. T. CARROLL, JR., M.D., Secy. Treas.

TIPTON COUNTY.

The Tipton County Medical Society met in afternoon and night sessions in the Moose

Hall, Wednesday, December 10th, with the President, Dr. J. E. Edwards, in the chair. The minutes of the previous meeting were read and approved.

The following interesting program was carried out, after which the ladies of the Methodist Church served a dinner at 6:30:

Program.

1. Report of Various Committees—"Rating Book," etc.
2. The election of new officers.
3. President's address, by Dr. J. E. Edwards, Mt. Carmel.
4. "Pneumonia," by Dr. N. W. Kelley, Clopton.
5. "Diphtheria," by Dr. J. B. Witherington, Mumford.
6. "Causes and Treatment of Abortion," by Dr. S. Hurt, Brighton, Tenn.
7. "Practical Medicine," by Dr. A. J. Roby, Tabernacle.
6:30 o'clock. Dinner by ladies of the First Methodist Church.
8. "Treatment of Puerperal Infection," by Dr. J. F. Wilson, Burlison.
9. "Eye Syphilis," by Dr. O. Dulaney, Dyersburg.
10. A Paper, by Dr. Robert Mann, Memphis.
11. "Iodine as an Antiseptic," by Dr. Eugene Johnson, Memphis.
12. A Paper, by Dr. F. R. Kenton, Memphis.
13. "Cancer as a Surgical Problem," by Dr. B. V. Dickson, Covington.
14. Report of cases.

The meeting was greatly enjoyed by all present.

DR. L. J. LINDSEY, Secretary.

JACKSON COUNTY.

The Jackson County Medical Society was called to order at 1 p. m., Monday, December 15th, by its President, Dr. J. T. Conditt. Minutes of the November meeting were read and approved, after which officers for 1914 were elected as follows: President, Dr. E. W. Mabry; Vice President, Dr. H. P. Loftis, both of Gainesboro; Secretary-Treasurer, Dr. C. E. Reeves. This was followed by a very interesting meeting, and some instructive case reports were given: Dr. C. Sidwell reported

having delivered a monstrosity, viz: had hare-lip, hydrocephalus, large tumor on abdomen, talipes equino, varus, etc. Dr. A. M. White brought before the Society a foetus which seemed to have been nourished until about the fourth month, but which seemed to have been in utero for nearly eight months, as menstruation had been arrested for that length of time.

There being no further business, the Society adjourned.

C. E. REEVES, M.D., Secy.-Treas.

POLK COUNTY.

The Polk County Medical Society met December 13th, in extra session, with the President, Dr. L. E. Kimsey, in the chair. Other members present were as follows: Drs. W. Y. Gilliam, F. M. Kimsey, A. W. Lewis, E. M. Akin, J. J. Barnes, and F. O. Geisler.

The object of this meeting was to transact all the business of the regular November meeting. Dr. A. W. Lewis moved, seconded by Dr. Barnes, that the Society take from the table the matter pertaining to Medical Defense. After a thorough consideration of the matter by the Society, Dr. Lewis moved, again seconded by Dr. Barnes, that the plan be rejected. A vote was held, unanimously sustaining Dr. Lewis' motion. The President then instructed the Secretary to advise Dr. Miller, Chairman of the Committee for Medical Defense, the action of the Society.

This was followed by the election of officers for the ensuing year: Dr. L. E. Kimsey, Ducktown, re-elected President; Dr. J. J. Barnes, Copper Hill, re-elected Vice President; Dr. F. O. Geisler, Isabella, re-elected Secretary-Treasurer; Dr. W. Y. Gilliam, Copper Hill, elected Censor for three years. The President then appointed Dr. W. Y. Gilliam delegate to the State Medical Association, to be held in Memphis, with Dr. F. O. Geisler alternate.

The President requested Dr. A. W. Lewis, of Copper Hill, to prepare and read a paper before the Society at its regular meeting the first Saturday in January, permitting the essayist to select his own subject.

There being no further business, the Society then adjourned.

F. O. GEISLER, M.D., Secy.-Treas.

DAVIDSON COUNTY.

October 28th.—The regular meeting of the Academy was called to order by the President, Dr. Olin West. The Secretary being absent, Dr. W. M. McCabe was requested to act in that capacity. Those present were: Drs. Sanders, Hugh Barr, Aycock, Wilson, L. Caldwell, Schell, Bloomstein, Morrissey, Leonard, Cowden, DeWitt, Litterer, Eggstein, Harris, Edwards, Jack Witherspoon, Howard King, Simons, C. F. Anderson, Floyd, R. A. Barr, Tigert, Billington, Oughterson, Larkin, Smith, Hibbett, and visitors.

There was no essay scheduled for the evening. Case reports were called for and the following members detailed cases: Drs. Sanders, Lucian Caldwell, DeWitt, Oughterson and Bloomstein. There being no other business, the Academy adjourned.

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November 4th.—The regular weekly meeting of the Academy was called to order at 8:20 p. m. with the President, Dr. Olin West, in the chair. Those present were: Drs. R. A. Barr, Howard King, Hargis, Toy Savage, Campbell, Black, Goodwin, Floyd, Sanders, Hugh Barr, Lucian Caldwell, Sayers, Witt, Kemmon, Hibbett, Cowden, Edwards, Sharber, Eggstein, Shoulders, Williamson, McIlvain, Tarpley, Fuqua, Aycock, Oliver, Ward, McCabe, Hatcher, Keller, Bloomstein, Robertson, Bromberg, Manier, DeWitt, Spitz, J. A. Witherspoon, Brush, Litterer, Pollard, Tigert, Oughterson, and visitors.

Dr. Witt moved, seconded by Dr. R. A. Barr, that the reading of the minutes be dispensed with. Carried.

Dr. Howard King presented a rare case of "Keratosi Follicularis." Dr. King stated that there were only about a hundred cases recorded in the literature. The patient was present and the diagnostic points brought out. The pathology was also demonstrated by microscopic slides.

The essay of the evening was a special address by Dr. C. A. Robertson of Ridgely, Tenn., his subject being "The Tuberculosis Problem."

The privilege of the floor was extended to the visiting physicians by the President.

Dr. Cowden was the first to discuss Dr.

Robertson's paper, saying that it was the most readable paper he had ever heard and congratulating the essayist on it. Dr. Cowden stated that he believes that we are on the eve of the discovery of a cure for this disease, because there are too many master minds at work on the tuberculosis problem for the cure to be very far off. In regard to the climate in which to treat tuberculosis, Dr. Cowden differed from the essayist in regard to Tennessee, saying that he believed this State to be the least adaptable to the successful treatment. Dr. Cowden believes that there is a time in the disease when every patient sent west will get well. He cited cases illustrative of his contention of the advantage of the climate of the west over Tennessee.

Dr. Oliver stated that he didn't believe, as Dr. Cowden claimed in the case he reported, any patient with a temperature of 103.4, and both lungs involved, would get well in any climate. Dr. Oliver stated that he believes the disease difficult to cure, saying that at the Davidson County Tuberculosis Hospital only twelve cases have been discharged as cured since that institution was established about two years ago. He believes the fault is with the physician in not making an early diagnosis.

Dr. Tigert remarked that he believes the solution of the tuberculosis problem is in prevention, and not in cure, and does not believe, like Dr. Cowden, that a cure is in sight. Food, fresh air, rest and possibly tuberculin are the greatest factors in the cure. As to the climate, any change in this increases metabolism, whether the patient be tubercular or normal. Also, when a tubercular patient leaves home he devotes all his time to the treatment, but rarely does this at home. He thinks that if a patient would do the same at home as he does in the West, he would get along about as well. He agreed with the essayist that a patient should try to get well in the same climate in which he intends to live.

Dr. Witt: In his experience he cannot think of many cases of cured pulmonary tuberculosis, and thinks the statement of the essayist that tuberculosis is the most curable of chronic diseases is based on European autopsies of all types of tuberculosis, and not

pulmonary exclusively. Dr. Witt believes that the solution of this problem rests only with the State; the latter taking charge of all tubercular cases and segregating them. Thinks there is something in climate, or rather in going away from home, since the patient makes a business of getting well.

Dr. Shoulders discussed the problem from the viewpoint of the State, saying, in reply to Dr. Witt, that Germany was ready to abandon this State control, as it was maintained at a tremendous cost without lessening the incidence of the disease.

Dr. Robertson (closing) said there was no ideal climate for a tubercular patient, there having been cures in any climate when the effort has been made. He agreed with Dr. Tigert that the greatest hope of solving the tuberculous problem is in prophylaxis. Dr. Robertson said that in his limited experience in Tennessee his results have justified his faith.

Under the head of case reports, Dr. Howard King discussed his case of Keratosis Follicularis presented earlier in the evening. He stated that the disease is incurable, though two cases have been reported as cured by touching the cutaneous horns with the thermocautery. The X-ray has been reported as beneficial in some cases. Dr. King proposed to use carbon dioxide snow on the hypertrophied areas on the feet. Adjournment was taken at 9:50 p. m.

November 11th.—The regular weekly meeting of the Academy was called to order by the President, Dr. Olin West. In the absence of the Secretary, the reading of the minutes was dispensed with. Dr. A. G. Nichol consented to act as Secretary. Among those present were: Drs. R. A. Barr, J. A. Witherspoon, Witt, Neil, Bloomstein, Duncan Eve, Sr., Morrissey, Larkin Smith, Harris, Fuqua, Hatcher, Cayee, Leonard, Dixon, Hibbett, Aycock, Tigert, Lucian Caldwell, Howard King, Weaver, Brush, Jack Witherspoon, Thach, Kemmer, Fort, Hill, Eggstein, Sayers, and visitors.

Essay of the evening was read by Dr. R. A. Barr on "A Review of Some of the Surgical Theories of Intestinal Stasis."

Dr. T. G. Pollard was scheduled to open the discussion, but was absent.

The discussion was then opened by Dr. W. H. Witt, who was followed by Drs. Tigert, J. M. King and Hill. Dr. Barr then closed the discussion.

Under "Case Reports," Dr. J. M. King reported an interesting case of pellagra in the father of a patient he had apparently cured two years ago. He reported the case to see if some light could be shed on the mode of transmission of the disease. This topic was discussed by Drs. Hibbett, Lucian Caldwell, Hibbett and West.

The Academy then adjourned.

DYER COUNTY.

The Dyer County Medical Association met in regular session, Thursday, January 1. Dr. W. O. Sullivan, President, presiding.

Papers read by Dr. J. H. Smith, of Tremble, on "The Prevention of Tuberculosis," which was discussed by Drs. Dulaney, Hornbrook, Price, Flanary and Sullivan.

Motion was made by O. Dulaney that a committee of three (3) be appointed on "tuberculosis," whose duty it was to see that each and every school in the county had a physician to lecture to it, at some time during the year 1914. Motion was carried, and the following committee was appointed by the Chairman: Drs. J. H. Smith, Trimble; O. Dulaney, Dyersburg; Luther Edwards, Finley, and Dr. R. L. Witherington, of Trimble, was elected to membership.

Proposed amendment to the By-Laws was unanimously carried, and was referred to the committee of the American Medical Association for their approval.

This Society adjourned, after which a banquet was given at the Virginia Hotel, by the Dyersburg physicians to the physicians of the county.

The following officers were elected by the Dyer County Medical Society, at their regular December meeting:

President, Dr. W. O. Sullivan, Churchton.
First Vice-President, Dr. W. W. Holland, RoEllen.

Second Vice-President, Dr. J. H. Smith, Trimble.

Secretary, O. Dulaney, re-elected.

Delegates to the State Medical Society: Luther Edwards, Finley.

Censor for three years, Dr. J. H. Green, Trimble.

DR. O. DULANEY, Secretary.

CHESTER COUNTY.

The Chester County Medical Society met in regular session in Henderson, January 3, 1914, with the following members present: Drs. J. D. Anderson, N. B. Marsh, L. G. Smith, J. U. Kent, H. B. Brown, J. L. White, W. C. Brown, and J. R. Carroll. After an interesting meeting the election of officers for the ensuing year took place as follows: Drs. J. D. Anderson, President; N. B. Marsh, Vice-President, and L. T. Smith, Secretary and Treasurer.

There being no further business the Society adjourned.

J. R. CARROLL, M.D., Secretary.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met in the office of Dr. E. H. Jones, in Murfreesboro, at 2:00 p. m., January 7, 1914. The meeting was called to order by the President, Dr. E. M. Holmes, and the minutes of the last two meetings were read and approved. The Anti-Narcotics Law was the subject of general discussion, as was also some business matters which came before the Society.

The members in attendance were as follows: Drs. M. B. Murfree, E. H. Jones, Rufus Pitts, E. M. Holmes, A. J. Jamison, J. C. Overall, J. T. Harris, R. W. Read, W. C. Bilbro, B. N. White, J. A. Scott, and S. C. Grigg. Dr. E. H. Jones was elected delegate to the next meeting of the State Medical Association, with Dr. A. J. Jamison alternate, after which the Society adjourned.

RUFUS PITTS, M.D., Secretary.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met in the office of Dr. E. H. Jones, in Murfreesboro, Wednesday afternoon, December 3, 1913. The President being absent, Dr. E. H. Jones was made Chairman pro-tem. An

interest paper on "Obstetrical Maxims Emphasized and Epitomized" was read by Dr. E. H. Jones, and discussed by Drs. E. O. Jenkins, G. W. Crasthwait, A. J. Jamison, M. B. Murfree, E. M. Holmes and R. W. Read.

The following officers were then elected to serve for the ensuing year: Dr. E. M. Holmes, President; Dr. E. O. Jenkins, Vice-President; Dr. Rufus Pitts, Secretary and Treasurer; Dr. M. B. Murfree, Assistant Secretary and Treasurer.

The following members were present at this meeting: Drs. E. O. Jenkins, R. W. Read, G. W. Crasthwait, E. H. Jones, M. B. Murfree, A. J. Jamison, S. C. Grigg and E. M. Holmes.

There being no further business to come before the meeting the Society adjourned.

RUFUS PITTS, M.D., Secretary.

McNAIRY COUNTY.

The McNairy County Medical Society met in regular session, December 17, in Selma, with the following members present: Drs. W. H. Hodges, T. G. Jackson, E. M. Smith, H. G. Sanders, R. M. Kendrick, J. L. and J. R. Smith. A very interesting paper was read on "The Benefit Derived from Our Medical Society," by Dr. H. G. Sanders, which was fully discussed by Drs. Hodges, Smith and Jackson. Another splendid paper on "Medical Ethics" was read by Dr. T. G. Jackson, and discussed by all members present. The Society then took up the question of ratifying the action of the Tennessee State Medical Association in adopting a plan for Medical Defense. It passed unanimously. This was followed by the election of officers for the ensuing year: Dr. E. M. Smith elected President; Dr. H. G. Sanders, Vice-President; Dr. T. G. Jackson, Secretary and Treasurer.

There being no further business, the Society adjourned.

J. R. SMITH, M.D., Secretary.

WHITE COUNTY.

December 11, 1913, Society met in Dr. A. F. Richard's office, with sixteen members present.

Dr. Brock read a good paper on "Rheumatism," which elicited a good discussion.

Dr. Cantrell presented a very interesting

cases of supposed cancer of the testicle with metastatic infection of the liver, and one of the glands of the neck.

The query box was very interesting and instructive.

The election of officers resulted in the election of S. S. Marchbanks for President; R. E. Lee Smith for Vice-President; A. F. Richards for Secretary-Treasurer; J. R. Gott for Censor.

The profession of White County is in good condition. The Society is working harmoniously and a general good feeling existing toward each other.

The health of White County is good. There has been no epidemic of any kind in 1913.

A. F. RICHARDS, Secretary.

Book Reviews

GENITO-URINARY DISEASES AND SYPHILIS, by Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor Journal-Record of Medicine; Urologist to Wesley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanitarium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga., assisted by Omar F. Elder, M.D. The Wasserman Reaction, by Edgar Faullin, M.D. Second Edition Revised. 527 pages with 109 illustrations and five colored plates. Price, \$5.00 net. E. W. Allen & Co., Atlanta, Ga.

GENITO-URINARY DISEASES AND SYPHILIS, by Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor Journal-Record of Medicine; Urologist to Wesley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanitarium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga. Assisted by Omar F. Elder, M.D. The Wasserman Reaction, by J. Edgar Faullin, M.D. Second Edition, revised, with 109 illustrations. Publishers, E. W. Allen & Co., Atlanta, Ga.

DISEASE AND ITS CAUSES, by W. T. Councilman, A.M., M.D., LL.D., Professor of Pathology, Harvard University. Published by Henry Holt & Co., New York City.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Med-

ical College, Philadelphia, assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Volume IV. December 1st, 1913. \$6.00 per annum. Lea & Febiger, Philadelphia.

THE TREATMENT OF RHEUMATIC INFECTIONS. Published by Parke, Davis & Co.

PRINCIPLES OF SURGERY. By W. A. Bryan, A.M., M.D., Professor of Surgery and Clinical Surgery at Vanderbilt University, Nashville, Tenn. Octavo of 677 pages, with 224 original illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$4.00 net.

MATERIA MEDICA, PHARMACOLOGY, THERAPEUTICS AND PRESCRIPTION WRITING. Materia Medica, Pharmacology, Therapeutics and Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University. Octavo of 602 pages. Illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.50 net.

HISTORY OF MEDICINE, with Medical Chronology, Bibliographic Data, and Test Questions, by Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C., Editor of the "Index Medicus." Octavo of 763 pages; many portraits. W. B. Saunders Company, Philadelphia and London, 1913. Cloth, \$6.00, net; Half Morocco, \$7.50, net.

CHANGE OF TITLE.

Fairchild Bros. & Foster.

The manufacturers having changed the name Essence of Pepsin, Fairchild to Pepsencia, the Council directed that the corresponding change of title be made in New and Nonofficial Remedies.

ARTICLES OMITTED FROM N. N. R.

Armour & Co.

Having been withdrawn from the market the Council voted that Glycerole Trypsin, Armour, be omitted from New and Nonofficial Remedies.

Pitman-Myers Co.

Having voted not to accept papain for inclusion with New and Nonofficial Remedies the Council voted to omit the Aromatic Cordial, P. M. Co. from the appendix to New and Nonofficial Remedies.

The announcement of the death of Dr. W. G. Ewing, of Nashville, will come as a shock to his many friends and former students throughout the State. We regret that our lateness in going to press precludes a more extended notice of his death in this issue, but will appear in our next.

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GALL STONE DISEASE.*

Richard A. Barr, M.D.,
Professor of Surgery, Vanderbilt University,
Nashville.

"Every gall stone is a tombstone erected to the evil memory of the germ that lies dead within." In this sentence, Mr. Moynihan has given the pith of what is known of the etiology of gall stones, and makes us realize its salient and important feature as clearly, or possibly even more so than could be done with a volume. Our knowledge of the origin of gall stones in infection, though an attenuated one, should in itself jar us loose from our complacent, do nothing, attitude in treating patients in whom they are known to be present. I believe you will agree with me that in the average case a positive diagnosis of gall stones arouses no more feeling of responsibility for the life and health of our patient than would a diagnosis of flat foot, and stimulates no cerebration on the subject of treatment that extends beyond the use of morphia for the relief of pain, and possibly the wholesale waste of more or less pure olive oil and of sodium salts given by the stomach.

I am sure that my experience is not exceptional, and in looking back over the cases of gall stone surgery that I have done I find they nearly all fall into one or two classes: (1) those in which impaction of a stone in the cystic duct or in the pelvis of the gall blad-

der led to empyema, perforation or gangrene of that organ, and (2) those with common duct stone causing more or less biliary obstruction.

Gall stone surgery in my experience has largely been imperative surgery, and has often been desperate surgery, though the patient's general condition and the results of physical examination many times failed to make plain how desperate it was. In some cases so completely do the patient's symptoms and appearance fall short of indicating the seriousness of the pathology, and the risk of operation that these patients, after suffering for years, are brought to the surgeon already prepared for operation in expectation of the work being done on the day of delivery.

Familiarly with simple gall stone colic followed by periods of quiescence without recognizable, or at least without recognized symptoms due to the stones, has blinded the profession to the serious though clinically obscure pathological changes that may result from their presence in the biliary tract, and the superficial appearance of health (these patients are often fat in spite of repeated outbreaks over a long period of years), often conceals the operative risk in those who are finally driven to surgery. There is no disease of such common occurrence of which the surgical aspects are so little understood by physicians and laymen.

We are so accustomed to look upon the risk of abdominal surgery in the terms of peritonitis that we do not recognize the insidious changes undermining the resistance of

*Read before Middle Tennessee Association, Columbia, Tenn., November, 1913.

the subject of gall stones. I have never lost a gall stone case from peritonitis, and yet I have lost a larger per cent of these cases than of any other class.

We instinctively make in our minds a parallel between appendicitis and gall stones. We look upon perforation and gangrene as the dangerous features. We know these are rare and we wait until intolerable, persistent or frequently recurring pain forces the patient to demand that something be done, or until jaundice or a tumor reminds us that there is such a thing as surgical treatment for this condition.

Our ignorance of the surgical aspect of gall stones is double so to speak. We are ignorant of the safety of early operation, and we are ignorant of the danger factors in late operation. We know that the surgery of gall stones in recent years has carried a higher mortality than that of the appendix, and we don't stop to think of the reason for this. The reason is delay, not delay of a few hours or days during acute symptoms, but the delay of years during which the stones are silently at work.

Recurrent appendicitis may afflict a patient for an indefinite period and if operation is done at last the danger is just that which would have been present at early operation, that is the danger of peritonitis. Not so with gall stones. Gall stone disease with every passing year lessens a patient's resistance, weakens, for instance, his muscular system generally, but particularly the heart muscle.

We know something about the mortality of gall stone surgery, but we have not digested our knowledge, and we persistently compare gall stones with appendicitis, and formulate our advice on a similar basis. There are two points of differentiation that we recognize. We know that ordinarily delay of operation in acute gall stone trouble is justified or even demanded contrary to the usage in appendicitis. We know that operation for gall stones has had a much higher general mortality than operations on the appendix, so we delay in advising surgery on account of these isolated items of information. We do not appreciate the fact that early removal of gall stones from the gall bladder in the absence of acute cholecystitis carries little, if any, more risk than interval appendectomy,

and yet this is true. Here indeed the danger is merely that of peritoneal infection and with good surgery is almost negligible.

We do not realize that in late operation, and especially with common duct stones, the absence of jaundice, or evidence of infection, etc., (you might say a completely quiescent state with general appearance of health), does not justify a confidently good prognosis. Here the danger is not from peritonitis. These patients often stand the actual operative procedure well, leave the table in good condition to all appearance, the operative traumatism has been slight and the technic has been satisfactory in every detail possibly, and yet without evidence of hemorrhage, they do develop an increasingly bad pulse and die in from one day to a week in spite of all that can be done to stimulate them.

We don't realize that the quiescent period of late gall stone disease is not the same thing surgically that an early interval of repose would have been. Allow me to reiterate that the profession, as well as the laity, are ignorant of the actual safety of early operation, and that both fail to realize the very great risk in the concrete instance of late surgery, because the absence of acute symptoms lessens what is supposed to be the only risk, that of peritonitis.

Only on this basis can we explain the "extraordinary patience of those who suffer from gall stones," and of their attendants. Years of dyspepsia can be accounted for by failure of diagnosis, but repeated attacks of excruciating pain, plainly earmarked gall stone colic, would only be borne, or be advised to be borne, through ignorance of the safe and satisfactory cures of early surgery for gall stones, and the danger of and incomplete results of delayed operation.

There is no justice to either patient or surgeon in confining surgery to the worst type of any disease. Since gall stones are a mechanical proposition and since they cannot be subjected to the solvent influence of any substance so long as they are in the biliary passages, and since the tightest point in either the cystic, hepatic or common duct is the papilla of Vater, any such thing as medical treatment to get rid of stones large enough to give

rise to symptoms, might without undue emphasis and without injustice to the internist be classed as absurd.

A patient with gall stones may be frankly told that he has something that he cannot get rid of spontaneously except by an ulcerative process that is dangerous, and very apt to leave pathology as serious as the preexisting trouble. He can be told further that there are numerous recognizable and probably some clinically unrecognizable pathologic changes of a serious nature that will likely develop as the result of his retaining the stones.

He can further be told that early operation is safe (Mayo says that the Rochester mortality in uncomplicated gall stones is less than 5 per cent, and, of course, these are not really early cases) that at early operation nothing will have to be removed except the stones, and that the permanent results cannot be surpassed in any field of surgery. As time passes before operation the danger of operation itself increases, the danger of losing the gall bladder increases, and the likelihood of complete and permanent operative cure decreases.

It is not my purpose to dwell upon the complicating pathology of gall stones, but I do wish to call your attention particularly to Babcock's contention (*J. A. M. A.*, June 12) with regard to the cardiac lesions, for my experience has led me to be impressed with his position, and more and more frequent references to the injurious effects of biliary infections upon the heart, are to be found in the literature of the subject.

As already stated I have never lost a gall stone case from peritonitis, nor have I lost them, with one exception, from any cause that I could determine, except just a lack of vitality and recuperative power. The trouble has always been with the circulation, sometimes suddenly developed and again gradually but persistently.

Apropos of complicating pathology I will give you a few statistics to indicate its influence on the mortality of operation.

The Mayos give a general mortality of eight per cent in common duct stones and this rises to twenty-five per cent in complete obstructive jaundice.

D'Arcy Power in the *British Journal of*

Surgery for July, 1913, gives his results in seventy-three consecutive operations for gall stones, and they are probably comparable to those of the average surgeon who does emergency rather than elective surgery. In twenty-six cases without complications he had no deaths. In twenty-seven cases with minor complications (such as impacted stones, fibrous, shrunken or inflamed gall bladder) there was a mortality of 22.2 per cent. In twenty cases with serious complications (such as necrosis of gall bladder, either wholly or in patches, intestinal obstruction, etc.) he had a mortality of 55 per cent.

Wyman Whittemore reports in the *Boston Medical and Surgical Journal* for October 16, 1913, the result of surgery on the biliary passages at the Massachusetts General Hospital for ten years, ending January 1, 1911.

Cholesystostomy was done 325 times for gall stones, eighty-eight times for cholecystitis and six times for pancreatitis, with a mortality of 10 per cent (1901, 20 per cent, 1906, 4 per cent).

Cholesystectomy was done ninety-two times for gall stones and thirty-nine times for cholecystitis, with a mortality of 13.7 per cent (25 per cent 1902 and in 1904, no deaths in 1909).

Choledochotomy alone gave a mortality of 6.2 per cent, but choledochotomy and cholecystostomy done together gave 29 per cent, while choledochotomy and cholecystectomy gave 60 per cent mortality, 21 per cent of traced patients who had cholecystostomy for gall stones had recurrence of symptoms, while traced cases of cholecystectomy for gall stones showed recurrent symptoms in only 5.6 per cent.

Of sixty-four deaths in this series at the hospital, twenty died from peritonitis, ten from hemorrhage, twelve from shock, three from suppression of urine, six from pneumonia, six from septicaemia, two from subphrenic abscess and the others from unrecorded causes.

These results are due to delay. They do not any more represent the proper surgical risk of gall stone disease than does the mortality of strangulation of the gut represent the risk of constipation.

Our indications for operation in gall stone

disease need to be revised. The indications ordinarily given in text-books are not indications, they are imperative demands. A diagnosis of gall stones is the indication. Osler states that after repeated attacks of gall stone colic "the patient is much safer in the hands of a surgeon than when left to nature, with the feeble assistance of drugs and mineral waters." How often should the attacks be repeated to indicate surgery? I should say just often enough to make the diagnosis reasonably clear.

The diagnosis of gall stones however interesting does not come within the scope of this communication.

We now know that gall stones are one of the most frequent causes of "chronic gastritis," but I shall not detain you in an effort to set up sign posts for your guidance to those stomach cases of gall stone paternity. This is a plea for prompt surgical treatment in the already recognized and tagged cases of gall stone disease. I shall not even trespass upon your time with a reference to surgical technique, though that appeals to me strongly.

If these few remarks have appeared critical it is not because of any feeling that I have not myself been open to criticism. It was only through sad experience that I was made to realize the false notions upon this subject that I shared with many others, and came to see that there were hidden evil influences at work upon the prognosis of surgery undertaken after years of cholecystic and cholangic infection, no matter how mild the infection might be.

TREATMENT OF SYPHILIS.*

By Perry Bromberg, M.D.,
Professor of Genito-Urinary Surgery, Vanderbilt Medical College, Nashville.

The treatment of syphilis has occupied the mind of a large portion of the medical profession for several centuries; in fact, the history of this disease is replete with thrilling discoveries made along therapeutic lines, and one after another of so-called specifics has

fallen into disrepute, the profession feeling content to rely on their old and trusted friends—Mercury and Iodides. It is but fair to presume that the combined clinical experience of the past century, at least, relying on mercury as has been the case, was favorable to this drug, and that physicians felt that they were curing their patients. How often have we heard and read that syphilis was the most curable of all specific diseases, if the co-operation of the patient could be obtained. How beautifully the clinical evidence would disappear after mercury was begun. It is true that the profession realized that an occasional case of tabes would show up, or that paresis, insanities, or arteritis, etc., would occasionally occur, but they were content to attribute these (as they thought) rather rare and infrequent complications, to neglect upon the patient's part to take the treatment, or to faulty administration, either in time or in method. How familiar was the expression that a syphilitic could not be reinfected. How rare the reports of second infections. What were the real reasons for Colles' and Profeta's laws? How often told that tertiary syphilis was non-communicable? The answer to all of the above questions, by virtue of the discovery of the spirochaetae as the cause of syphilis, and the Wasserman test as a method of diagnosis, has been made plain and undeniable.

A syphilitic could not be reinfected because he was still the host of the spirochaetae, and as soon as a method of treatment was found that would rid the body of them, reinfection at once became possible and numerous reports of reinfection were announced.

That a mother may nurse her syphilitic offspring without becoming infected (Colles' law) is now known to mean that the mother harbored a latent infection, or that a healthy child may nurse its syphilitic mother with impunity (Profeta's law) is now known to be a myth and that the child was a syphilitic.

Infection from tertiary syphilis is no longer doubted.

The life cycle of the spirochaetae has not been determined, though Noguchi has successfully cultivated and isolated several strains. MacDonagh has recently published his researches, and if proven by other ob-

*Read before Nashville Academy of Medicine, January, 1914.

servers to be correct, will explain many of the phenomena not previously understood. "He has found, after the examination of many thousand lymphatic glands, that the organism resides in the connective tissue cells; by budding it gives rise to several bodies, which later become differentiated into male and female elements. The connective tissue cell becomes merely a sac, which bursts and frees the contained elements. Some are male and female, which go through a complicated life cycle, while others are set free and at once seek other connective tissue cells and start other cycles. Certain forms take at least two weeks to develop, and during the sexual life of the male and female elements, when they are intracellular, are not influenced by treatment either with mercury or salvarsan."

How true is this of other diseases produced by intracellular organisms. How readily does it explain the relapses with which we are all so familiar?

The modern conclusions, made possible by experimentation and by discoveries both of cause and of a method of correct diagnosis, have enabled us to accurately determine the value of any treatment, and surely what is now known is sufficient evidence of the unreliability of mercury alone.

It is not my purpose or desire to undervalue the efficacy of this drug as an adjunct in the treatment of syphilis, but I am strongly convinced that the remarkable discovery of Ehrlich and Hata has given us a combination in salvarsan and neo-salvarsan much more potent as a paraciticide to the treponema.

Watraszenski's report (published in the *Urologic and Cutaneous Review*, April, 1913) based upon an experience of more than a quarter of a century in the treatment of syphilis at the Hospital St. Lazare, in Warsaw, in speaking of the relative value of mercury administered by inunction and by other methods, especially by injections, claims 85 per cent of cures as evidenced by a negative Wassermann for the inunction method, whereas the result was reversed, viz., 85 per cent of failures to obliterate the Wassermann by the administration of mercury hypodermically; in fact, 85 per cent remained posi-

tive, 10 per cent indefinite, and only 5 per cent negative. If the conclusions arrived at by this careful and experienced observer can be relied upon, then surely in this country, where, strange to say, the inunction method has seemingly fallen into disuse, and other and far less potent methods have been substituted, we have failed to cure at least 85 per cent of our cases by the administration of mercury. I believe a careful review of modern literature relative to the treatment of this disease will corroborate the findings above quoted.

From what has already been said, it will be seen that personally I endorse the present-day method of combining the powerful paracitidal effect of salvarsan or neo-salvarsan with mercury, preferably by inunction as a supplementary treatment.

I do not wish it understood that I claim any method as being my own; my observations are taken from the literature, which of recent years has been very voluminous, and is simply my conception of what seems most certainly curative and most practical in application.

Salvarsan or Neo-Salvarsan. These preparations, and the various methods of their administration, each have their advocates. It would be tiresome and useless to review the various reasons advocated by this or that enthusiast for the intramuscular, subcutaneous, or intravenous methods of administering either of these preparations; but basing my opinion upon the reports from the Congress on Syphilis held at Rome, and upon my own personal observation, together with the observation of MacDonagh, already referred to relative to the life cycle and method of reproduction of the spirochaetae, I am convinced that the best method now in use is the intravenous, and that one full dose is not sufficient to act as Ehrlich originally thought as a **sterilizans magna**, but that several full doses, repeated at short intervals, one a week, for at least three weeks, is most likely to exercise the full paracitidal effect upon each succeeding generation of spirochaetae as they are thrown into the blood stream from their connective tissue nests.

I am unable to offer any sound reason why one preparation is better than the other. Neo-

Salvarsan has of late superceded Salvarsan in America, though in the German clinics the majority still rely on Salvarsan. The advantages of the later preparation are its neutrality, its ease of solubility and its lesser toxicity, which, while regarded as true by many, also thought to reduce its efficacy. Neo-Salvarsan is said to be more readily decomposed and may become very toxic. The dangers to life or to the nervous system or kidneys in administering either of these drugs has, no doubt, been grossly overestimated. We should not forget that the profession and the public threw themselves upon this drug with the avidity of "a pack of hungry wolves," and many administered it who were wholly incompetent to do so. The cases were unduly selected and the dosage undetermined. We now know that the dosage must be more carefully regulated and that while 0.6 grammes may be safely given to a primary case, in full vigor and strength, it would likely produce serious internal changes in a more delicate person already crippled by this co-existing disease.

Mercury. I do not think it can be denied that the combined experience of the medical profession for four centuries was misplaced in their reliance upon this drug, that it is beneficial, yes, even curative, cannot be questioned. But certainly it must be intelligently administered and the abuses to which it has been, and is still being, subjected must end. In the past few years syphilologists have been unanimous in their condemnation of mouth administration, and still it is the method in vogue by many who still rely upon protiodide pills or the old-fashioned mixed treatment.

The tendency of the day is strongly towards the intramuscular injections, though I must confess that I am still old-fashioned enough to agree with Watreszowski that the inunction method is the most efficient, though the least aesthetic.

The injections commonly employed are either the soluble or insoluble preparations. The advantages claimed for the former are that they are quickly absorbed and for that reason are more efficient. The advocates of the insoluble preparations claim that a slow

and continuous absorption is more desirable, and that fewer injections are needed.

I am rather strongly inclined to again agree with the majority, but can readily see the necessity in occasional cases where it is particularly indicated that the patient be brought rapidly under the influence of mercury, that the soluble and quickly absorbable preparations would be preferable.

The biniodide, oxycyanate and red iodide are probably the ones most frequently used.

The salicylate in suspension in liquid alboline is probably the most popular of the insoluble preparations used in this country, while the gray oil is used rather extensively abroad.

That the inunction method is the safest and most efficient way of administering it cannot be questioned by those who have had experience and whose minds are open to results. Watraszewski advises that if the mouth be in good condition the cure can begin at once. The patient is given a bath, at 90 F. temperature, containing a half pound of bicarbonate of soda, in order to render the skin more supple, and thus more susceptible to the absorption of the remedy, and takes his first inunction the same day. It is applied either by the patient himself or by some other person.

The regions of the body where the inunctions are applied change every day, and he recommends the following order: First day, the internal surfaces of the two calves; second day, the internal surfaces of the two thighs; third day, the lateral part of the thorax and the abdomen; fourth day, the back; fifth day, the internal surfaces of the two arms; on the sixth day, and subsequently, after each series of five inunctions, the patient is given a day of respite, during which he takes a bath and changes his linen. There is no objection to him doing this oftener if he so desires. The friction can be executed in two fashions; the quantity of ointment to be used is spread out on the surface of the entire region to be anointed, and is then rubbed in by slow, prolonged movements similar to those which one employs in giving massage. If the friction has been well executed there should be absolutely no trace of the ointment left upon the skin. The other

means is to make the ointment enter the skin by quick, short slaps with the palms of the hands, continuing to thus "beat" the skin until the absorption is complete. Twenty to thirty minutes will be required with either method, after which the skin is dusted with starch or talcum powder, and the patient goes about his business. He advises watchful care of the teeth and gums during the administration. The ointment selected is immaterial, the quantity in all being 1 of mercury to 2 of neutral base. Parke, Davis & Co. have upon the market a mereurette which I have found very satisfactory indeed, and the patients rarely object to their use. The dose should begin with half drachm for each inunction, which usually suffices to obtain the desired therapeutic effect, and if well borne, the dose, after five or ten inunctions, may be increased to three-fourths drachms and eventually a drachm; more can be given if necessary, though this dosage will usually be sufficient. Ordinarily thirty to forty frictions suffice to obtain the desired curative effect in the majority of cases running a normal course. He, of course, stresses the importance of keeping accurate observations of the weight and general condition of the patient, and regards a loss in weight to indicate too intense a mercurialization; this with anemia, nervousness, malaise, gastric disturbance, insomnia, etc., call for an interruption in treatment or a reduction in dosage.

Under the plan above outlined, I am convinced our percentage of permanent cures, as determined by the Wasserman reaction, will be materially increased.

The routine examination of the spinal fluid is as yet impractical, and I have had no experience with the leutine reaction.

Summary : High regard in which mercury has been held only partially correct.

MacDonagh's conclusions relative to the life cycle of the spirocheta, if proved to be correct, will throw much light upon the correct method of treatment.

Salvarsan and neo-salvarsan are curative agents. One dose is insufficient, three or four doses or more weekly doses, followed by mercury for one to two months, the better plan.

Mercury by inunction shows far better re-

sults than by any other method of administration.

Check results of treatment by Wassermann every three months.

CIRCUMCISION.*

C. F. Anderson, M.D.

Lecturer on Venereal Diseases, Vanderbilt University, Nashville, Tenn.

"The double ring method" of circumcision, which it is my purpose to present in this paper, has been employed by the writer, when indicated, for the past three years.

This name is taken to describe the manner and number of incisions that are made on the circumference of the penis.

The end results, in my opinion, are as near perfect as can be obtained.

The functions of protection and sexual sensation are retained, by other methods both are more or less completely lost.

This method is applicable only in the adult and better to those that are not diseased.

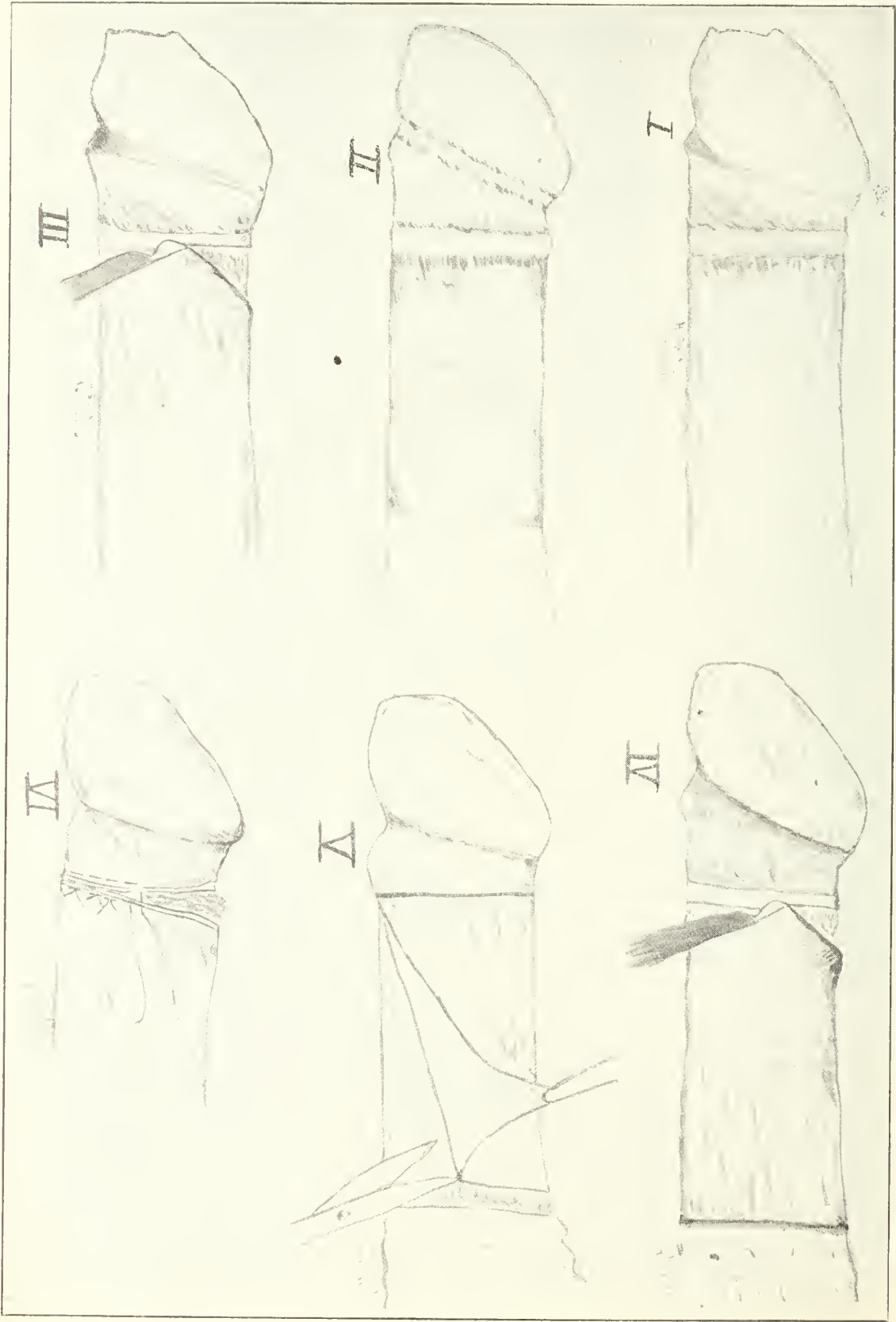
In those cases where the prepuce is large and easily retracted over the glands, this method is ideal. It is impossible to use it in those cases of complete phimosis, and not ideal if it is present in any appreciable degree, because after the prepuce is once retracted it may become impossible to reduce it after the injection of the anesthetic into the mucous membrane.

It is impracticable to use this method on very small children. Besides the results obtained would be no better than by other and easier methods.

This operation is best done under local anesthesia. I have used Cocaine Sol. 1 or 2 per cent strength.

The anesthesia in my experience has been **perfect and complete** when this method is employed, which I cannot say for others. This is due to its preciseness, with the least amount of cutting and no tailoring of the flaps. These patients do not complain of pain after the operation, which I attribute to the fact that it is done with the least amount of traumatism.

*Read before Nashville Academy of Medicine, January, 1914.



and no cutting of the large vessels to cause infiltration and pressure and pain.

This comfort is further enhanced by the first dressing used, which I will describe later.

The charts, which were drawn for me by Dr. Herman Spitz, show the technique of the operation in detail; therefore I will refer to them in the following description.

Fig. 1 shows a normal penis and prepuce. A line of anesthesia or ridge of infiltration (in the skin only) is placed one-quarter of an inch behind the corona on the dorsum, encircling the penis, being perpendicular to the line of its body and not paralleling the corona.

Fig. 2 shows the prepuce retracted and a ring of anesthesia placed in the mucous membrane one-quarter of an inch from the corona just as in the skin in Fig. 1.

Fig. 3 shows the foreskin pulled forward over the glans with the incision started in the line of infiltration. You can readily see that the line of incision in the skin is directly over that to be made in the mucous membrane. Therefore, when these two incisions are made and the skin dissected out, the two cut edges naturally fit together and do so without any further tailoring or stretching.

The incision, as shown in Fig. 4, does not cut the fraenum, but is proximal to it and leaves a longer flap of the mucous membrane below than above—the skin flap takes off more skin below than above, which in the end retains the more delicate and sensitive mucous membrane at the expense of the skin. This, I think, is a very important point.

Fig. 5 shows the two incisions completed and the intervening part to be removed. This is grasped with a forceps and denuded with a sharp pair of scissors, being careful not to remove the fat or wound the deeper vessels. Any bleeding vessels should be ligated and a thorough search should be made before uniting the cut edges, remembering that next to infection this is the most frequent source of trouble. However, if care is taken in dissecting the skin to be removed, there will be no vessels to ligate.

In uniting the skin to the mucous membrane, Fig. 6, I prefer No. 0 plain cat-gut and

use the mattress suture. This suture here has two advantages. First, it is haemostatic at least to the tissue within its grasp. Second, it can be begun on the skin surface and tied there, so that the ends will not prick the delicate mucous membrane.

The first suture should begin at the median raphe on the skin and the fraenum on the mucous membrane. The remaining sutures should be placed on either side alternately. This method will require a few more sutures than others, in order to cover the superficial fat, which is usually removed with the skin.

The union is entirely between the skin and mucous membrane and not through all the tissues to the deeper structure of the penis. Therefore, it is movable over the underlying structure, just as it was normally, and rolls down against the corona or partially covers it, thus affording protection to the most sensitive part of the glans for which it was intended.

I also wish to describe in this connection a dressing for the penis, which I have named "The Circumcision Splint." I first saw and I learned this from my colleague, Dr. Barr.

It consists of first a layer of gauze next to the wound, then a strip of cotton cut from an ordinary roll, about three inches wide and long enough to encircle the penis once or twice, owing to the thickness of the cotton. This strip is immersed in very hot water and applied like a bandage while wet and hot, then a gauze bandage applied over it. After the cotton dries on the penis it remains stiff and hard in the same way that felt splints are made. This dressing has several advantages.

First, it enables one to put on a decent bandage—and I know nothing harder to bandage than a plaid penis.

Second, it is hemostatic both because of the heat (which also adds comfort) and the uniform pressure that it exerts.

Third, it affords better protection than any other dressing that I am familiar with.

Fourth, it fits so closely to the glans that it does not allow soiling by urine dribbling under it; therefore can be left on for a long time.

MEANS OF LESSENING ANAESTHETIC INJURIES AND FATALITIES.

Robert F. Patterson, M.D.,
Knoxville, Tenn.

To say this subject is important is stating it very mildly. Anaesthesia is the bugbear of both the surgeon and the laity. When the surgeon submits to the knife himself, he selects his anaesthetist with loving care. About the surgeon he is not so particular. This paper is largely a resume of well-known facts, however, we shall attempt to assemble some new ideas which we deem of great importance.

Preparation of the Patient.—It has been customary in the past to put the patient through an extended course of preliminary treatment. I have seen patients starved for days before an operation. There could be no more effective means used to lower the patient's opsonic index, and render him an easy prey to infection. Who has not felt relaxed, blue, and disgusted for days after a so-called "heroic" dose of calomel? I wish to protest against such practice. All the average surgical case needs, unless it is an abdominal operation, to prepare him for the operation, as far as the digestive tract is concerned, is a simple enema. If a laparotomy, a moderate dose of oil is sufficient. An empty stomach, not a starved one is required.

George W. Crile has seemed to establish the fact that fear has the same effect upon the brain substance as infections, grave injuries, shock, etc., namely, "The alteration in the distribution of the Nissl substance; the change in the size relation of the nucleus and cell body; the rupture of the membrane covering the cell and nucleus; and changes in the gross size of the cell." To quote the author further, "Requiring the patient, unprotected, to stare death in the face, is like inspecting a photograph film in the sunlight and expecting to find it useful afterward." The sacred patient is using up vital energy at a mad rate. This must be prevented by the following methods: Keep the patient ignorant of the time of operation, if possible. Some operators go so far as to start the pa-

tient to the operating room a number of times before the actual time for operation, thus rendering him accustomed to the procedure. Quiet the nervous system and lessen its conductivity by giving hypodermic one hour before operation of morphine 1-8 to 1-4 grain with atropine 1-150 grain. The above procedures usually insure tranquility in the patient.

We will next proceed to a discussion of the dangers, immediate, and remote, of the three leading anaesthetics, chloroform, ether, and nitrous oxide with oxygen, in order to compare their dangers and thus assist in choosing the least harmful. According to Meyer and Overton, chloroform produces anaesthesia by the intracellular solution of the fatty constituents of the brain cells. It produces sleep by depressing first the brain, then the spinal cord, and finally the medulla. It depresses the heart and respiration, lowers blood pressure, and in fact depresses all the vital functions. Wood, in a recent edition, states that it inhibits the heart, even fatally so, by reducing the irritability of the motor ganglia. It stimulates the vagus and thus sometimes stops the heart entirely. It lowers blood pressure by direct depressant action upon the heart muscle. It is in addition powerful in its action upon the reflexes. Ether, on the other hand, while producing sleep like chloroform, is a stimulant. This, of course, renders it a much safer anaesthetic. It stimulates both the circulation and the respiration.

Remote Effects of Both.—Chloroform may produce widespread fatty degeneration of the vital organs, anemia, and haemolysis. Ether produces anemia, affects somewhat the pyramidal cells, and most important of all markedly lowers the opsonic index.

As my subject embraces choice of the anaesthetic, I have gone into detail above to compare these two time-honored agents with a more recently popularized one, namely, nitrous oxide with oxygen: Juliard and Ormsby, tabulated from the records of 407,553 cases the following mortality figures:

Chloroform, 1.....	3.162
Ether, 1	16.302

He gives no mortality table for nitrous oxide, but states that only seventeen deaths were

reported from 1860 to 1900. Reim, of Chicago, reports 30,000 cases, without a death, and Crile and Teter, of Cleveland, report 20,000, without a death. H. C. Wood puts the mortality from pure nitrous oxide and oxygen at 1----1,000,000. This wonderfully low mortality is explained by the fact that these agents have no deleterious effect upon the human economy. Degenerations, pneumonia, anemia, haemolysis and other destructive changes in the vital organs are almost unknown. The only way you can kill a patient with nitrous oxide and oxygen is to asphyxiate him, even then you have at hand always the most effective remedy, oxygen. Even the reputed production of glycosuria is now exploded. Crile says a patient can bear approximately four times the amount of operative trauma under this agent as under the above agents. It thus actually prevents shock. The horrid hallucinations of the chloroform and ether patient are largely absent, just a pleasant whiff or two and all is quiet. The strong armed orderly is seldom required. When properly administered this anaesthetic is regular and satisfactory in nearly all surgical conditions. Prince, of Birmingham, has used absolutely nothing else, not even "just a whiff of ether," in approximately 2,500 cases covering the entire realm of surgery. True the sleep is not so deep, more reflexes remain in action, the abdomen is not so well relaxed, the small child and the drunkard may be hard to get under its influence, the very fat man and the very old man may not be good subjects, yet what anaesthetic has no drawbacks? Granting nitrous oxide and oxygen equally dangerous with chloroform and ether, the fact that it leaves no disastrous consequences in its wake makes it still the anaesthetic of choice.

Just here we wish to utter a word of caution against the mixed narcosis of ether and nitrous oxide and oxygen. A critical study of the fatalities that have occurred here and in other communities will reveal the fact that in most cases, in not all, "Just a little ether" was mixed in. A concentration of ether vapor of over seven per cent is highly injurious to lung tissue and bronchial cells. One drop of ether given by the absolutely closed method, little being eliminated, is probably equal to twenty by the open method. A pa-

tient already asleep may be quickly and surely pushed over the brink beyond recall and nitrous oxide gets the blame. So much for their comparative safety.

The following ideas have increased safety of anaesthetics in recent years:

First. Breathing, or the use of the carbon dioxide elaborated by the patient as a respiratory stimulant. To Gatch, of Baltimore, is due the credit of popularizing the idea. Basing his research upon the work of Yandell Henderson, he studied chemically the contents of the expired air and exploded the idea that it contained harmful organic poisons. He found carbon dioxide and water vapor the only constituents capable of producing harm. Having accepted the statement of Henderson that shock is produced by acapnia, due to excessive ventilation of the lungs, he proceeded to utilize the carbon dioxide breathed out by the patient and thus confirmed Henderson's idea that it is among the best of the respiratory stimulants, being in addition the natural stimulus of the venous wall.

Second. Slow induction of anaesthesia when chloroform and ether are used. From ten to twenty minutes should thus be utilized.

Third. The constant use of the blood pressure apparatus. It is the author's custom to attach a Faught's instrument to the arm before administration is begun and of taking the pressure at frequent intervals during the operation. The fall of blood pressure gives advance information of circulatory failure and shock.

Fourth. Continuous auscultation of the chest. Teter uses a small Kehler instrument with long tubes stuck to the patient's chest with adhesive plaster.

Fifth. Prevention of strangulation and aspiration of infective material from mouth and throat which often produces pneumonia, by drying up the secretions with morphine and atropine.

Sixth. Most important of all, the use of a local anaesthetic in the wound to prevent traumatic stimuli from reaching the brain. Crile calls it anociassociation. Scarcely half the anaesthetic is required to keep the patient asleep when this is used as when it is not used.

In concluding we wish to state that we consider nitrous oxide with oxygen, preceded by a hypodermic of morphine and atropine, combined with anoci-association, utilizing re-breathing according to the method of Gatch, the safest anaesthetic yet produced.

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SOME OBSERVATIONS IN ANAESTHETICS.

W. N. Lynn, M.D.,
 Knoxville, Tenn.

The observations brought out in this paper are based upon some two thousand anaesthetics given for the Surgical Staff of Lincoln Memorial Hospital of Knoxville. I desire, however, to call attention to the so-called minor points in the art of giving anaesthetics, points which are often overlooked or carelessly disregarded by anaesthetists and points which often make or marr the success of an anaesthetic.

Anaesthetics are being looked upon by the profession with more and more concern, and it is a noticable fact that our surgeons are exacting of the profession greater skill in anaesthesia. The June meeting of the American Medical Association dwelt forcibly upon the statement that anaesthetics should be in the hands of trained anaesthetists. I will not attempt to discuss the choice of anaesthetic, but will refer to the methods of giving.

The preparation of a patient—both immediate and remote—for an anaesthetic means a great deal. When it is possible this preparation should be begun one week before the anaesthetic is given. During this time the bowels should be thoroughly cleansed and large quantities of water administered at regular intervals. No enemas should be given under twelve hours of operation and but the lightest liquid diet administered within that period. Unfortunately it is rarely possible to carry out this ideal preparation, the rule more often being an allotment of twenty-four or maybe twelve hours for preparation. In such event the bowels should be cleansed as thoroughly as possible by purgative and enemas, no enema, however, being given under two hours of operation. Later enemas are very often expelled upon the table. The stomach also should be empty, no fluid of any kind being taken under at least one hour of operation.

The anaesthetic room should be made as quiet and cheerful as possible. No talking or laughing should be allowed, yet withal a cheerful mein and atmosphere should pervade the room. In carrying on the necessary conversations with nurses or physicians the anaesthetist should never whisper, but should talk in a low distinct voice. If it is a conversation which you do not wish your patient to hear see that it is talked **outside** the patient's room. The presence of physicians attired in operating gowns, the clicking of instruments, and too often the laying out on a table in full view of the patient of instruments to be used in the operation have a decided depressing effect upon your patient and should never be done. For this reason it is better to anaesthetize your patient outside the room in which the operation is to be performed. Also, the presence of members of the family in the anaesthetizing room is undesirable. By their presence the emotions of the patient are played upon, and the early scare of the anaesthetic and impending operation is increased, and many times a real hysteria follows. Again, the anaesthetic may not prove without incident, sometimes of moment, oftentimes of no moment whatever, but to an anxious friend your patient may seem to be dying and you complacently looking on, disregarding what

seem to him to be death symptoms. Should grave symptoms really arise—and they will arise at times no matter how expert the anaesthetist may be—the anaesthetist could be placed in no more embarrassing position than to be forced to combat a serious emergency in the presence of the family or friends. Therefore, the rule of excluding family and friends should be rigidly observed in all cases, and especially, I want to say, in minor operations and in operations upon the nose and throat and in all other cases where deep anaesthesia is not desirable, as in these operations the patient often groans and even cries out during the operation, although perfectly unconscious of pain. Nothing will cause greater panic among family and friends than such a condition.

The heart should be thoroughly examined before every anaesthetic, and this should be made a rule from which no variation whatever should be made. Too often heart examinations are carelessly made. Each valve should be auscultated and any murmurs found reported to the operating surgeon **before** the anaesthetic is commenced and not after the patient is placed upon the operating table. This will give him opportunity to himself listen to the heart, if he so desires, and pass upon the risk. Soft murmurs contraindicate operation more than loud murmurs, loud murmurs indicating that compensation has been established. Murmurs purely haemic in character do not contraindicate operation. The force and regularity of the heart should be carefully noted. An irregular, weak heart is an unsatisfactory risk always, and no anaesthetist should ever proceed with the anaesthetic under such condition without the surgeon being fully aware of it and giving consent. Ofttimes the irregularity is purely nervous in character, and is accompanied by other signs of nervousness, such as fast and labored respiration, tossing head, twitching hands and a facial expression hardly to be mistaken. These symptoms disappear under anaesthesia, and are therefore of no moment.

Conversation with your patient during the preliminary preparation of the anaesthetic should be pleasant. Never go to the anaesthetic room bowed down with care, or with a care-doleful expression on your face. No mat-

ter how many anaesthetics you may have given that day prior to the one in hand, make your patient feel you are fresh for the work and happy in the service you are about to perform. Let him feel that you are vitally interested in the success of this one anaesthetic, and are going to put forth your best efforts to this end. This need not be told in words, but shown by a cheerful mein and an attitude of confidence in yourself.

The lips and nose in the meantime have been annointed with vaseline, and the mouth examined for false teeth. If the false teeth are in plates it is better to leave them in position, as their removal causes sinking in of the cheeks and supporting pressure behind the angle of the jaw causes the opposing gum surfaces to come in contact, with often a subsequent narrowing of the glottal opening. With a jaw properly held in position there will be no danger loosing plates. It is a very good custom to have your patient clasp his hands over his chest and tell him to place the ends of his thumbs together and exert even pressure upon them. Not too great pressure, as this will tire him out, but enough to give him something to think about and thus keep his mind off the anaesthetic. Tell him it steadies his circulation and therefore puts him in the best possible condition for the operation. The majority of patients come to the anaesthetic room with an inherent fear of a weak heart, and they believe for this reason they will be unable to stand the anaesthetic. Therefore the steadying of the circulation means to them a very great deal, and they are willing to co-operate with you to this end in every way possible. Never tell your patient to breathe deeply—that the deeper breaths he takes the sooner he will be asleep, etc. This is not true. The breathing should be as near the natural as possible, and to this end no mention whatever of the respiration should be made. On the other hand, do not tell your patient to breathe naturally; he will breathe naturally if you will let him alone.

Always give ether and chloroform by the drop method. Make this an invariable rule. The pouring on the mask of quantities of anaesthetic and slapping the cone over the patient's face and telling him to breathe deep-

ly—of necessity, causing him to strangle and struggle—is a practice of the long ago, and no modern physician would think of doing it. Have enough gauze on the cone to hold the drops well—say ten to twelve ply thick—and give your patient enough air to make a mixture that he can breathe without strangling. In cases of children it is a nice plan to add to the mixture of anaesthetic and air a few drops of oil of bergamont, oil of rose or toilet water now and then until the patient is asleep. This will be found to be a valuable aid in handling these cases. It is also a good plan in all anaesthetics to carry on with your patient a running conversation in a low monotone—keeping him often reminded of the necessity of keeping his thumbs together. The conversation need not be of any import whatever, the low, running, even tones acting in the manner of a lullaby, so to speak, and this does much to quiet your patient. Hiccoughing, sighing, rolling of the eyes in the first stage are signs of incomplete anaesthesia. Too often some of these signs are mistaken by the inexperienced as bad omens and the anaesthetic decreased instead of increased. The result is a semi-conscious patient, with rigid abdominal walls—twisting, squirming—a condition despised by every surgeon and one which is no credit whatever to the anaesthetist.

The best guide to the detection of complete anaesthesia is the respiration. This becomes full and regular, and in the surgical stage takes on a quality hard to describe, but which becomes familiar to every anaesthetist. Some anaesthetists determine surgical anaesthesia by touching the conjunctiva with the finger. This is entirely unnecessary and should never be done, as infection of the conjunctiva may follow. During anaesthesia the patient's head should be turned to one side so that accumulating mucous can gather in the cheek instead of passing into the throat. However, it should be seen to that the patient's head is not tilted far back, as this narrows the glottis and obstructs breathing. The head should be level with the body, and if anything tilted very slightly forward.

The patient should be **thoroughly** anaesthetized before the incision is made, as passing through the skin will cause awakening of reflexes if there is only partial anaesthesia.

Death has ensued from this cause. If the skin incision is well borne you may feel all its life before it. Life with all its wondrous pretty well assured that your patient will not flinch under separation of muscle and fascia. The peritoneum is another reflex-awakening membrane, and often when this is incised your patient will get rigid and strain. To avoid this, ample anaesthetic should be given while the operator is passing through the abdominal wall. Also, when closure is about to be made, a patient who was completely relaxed during intra-abdominal manipulations and handling of viscera will very often strain when the suture of the peritoneum is commenced, a very undesirable condition for the surgeon, especially in post-rectus peritoneal openings.

The anaesthetist should keep familiar with the progress of the operation, the structures being or about to be handled and thus judge the degree of anaesthesia required. Aside from this observation no other attention should be given the operation. The drop method should never be varied from, no matter how great the demand for immediate relaxation or how safe you may consider some other plan at the time. This is the safest, most effective way. It is a good plan to get into the habit of never taking the finger off the facial artery during the operation. Using the left hand for this, the index finger is on the pulse, while with the second and third fingers the jaw is held firmly upward and forward. This gives the patient the best possible throat breathing space, and at the same time gives you constant knowledge of the circulation. The patient's skin should be watched; if leaking atropine is indicated. It is a good method to precede your anaesthetics in adults with a hypodermic of morphine grs. 1-8 atropine grs. 1-50 half hour before operation. Morphine in that dose will quiet your patient and steady the circulation, and the atropine will stimulate both circulation and respiration and make dry the respiratory tract and thus do away, in a great measure, with the troublesome mucous.

Respiration, circulation and skin form a triad of functions to be closely watched, and in the order named to be considered throughout every anaesthetic, no matter what the character of the anaesthetic may be.

HOW TO CARE FOR THE NEW BABY'S EYES.*

Robert Fagin, B.A., M.D.,
Associate Professor of Diseases of Eye, Uni-
versity of Tennessee. Oculist to City
Hospital and Baptist Hospital,
Memphis.

Do you know that inflammation in the eyes of the new born baby causes permanent blindness! and that this inflammation is preventable, and is always due to neglect of the physician or nurse? Do you know that prior to 1881 eighty per cent of all blindness was due to this inflammation, or infection, and that Crede, at this time, discovered that this disease would not appear, if a two per cent solution of silver or nitrate was dropped into each eye of the new born baby? Do you know that ten per cent of all the new babies in this hospital in Leipsic, Germany in which Crede was director of the maternity department, had this inflammation, and that his preventive treatment reduced it from ten per cent to one tenth of one per cent?

Do you know that his treatment is just as good today as it was then, and that it is used in all civilized countries by the best physicians, nurses and midwives in each eye of every new born child?

Do you realize that, if you fail to use this prophylactic measure in the eyes of the next baby you deliver, this infection may arise, and, once started, even with the best treatment possible, both eyes may be destroyed, and that you are to blame?

Do you know that in 1911 our Tennessee State Legislature passed a law, which makes the omission of this preventive treatment a misdemeanor, or mal-practice, and that the parents of this baby, whom you have neglected, may sue you for damages and gain the suit?

Do you know that this disease is no respecter of persons or places? That it may be found in the country or in the city, in the babies of the poor, or in the babies of the rich, and in civilized or uncivilized countries, and, that, since this is true, every new baby

should be given the value of this preventive treatment?

You are asked seven questions in order that you may realize that the babies of our Tennessee homes are entitled to this prophylactic treatment, and that you are responsible, and should, in every case, use these drops yourself. If you do, then you may rest assured that out of 1,000 already infected cases, only one will develop this disease, and that this one, on account of the treatment, will run a milder course. A recent letter from Dr. John V. Armstrong, of Nashville, Superintendent of our State School for the Blind, tells me that a conservative estimate places ophthalmia neonatorum the cause of at least one-third of the total blindness in our State. Think of one out of every three blind children being totally blind from a wholly preventable disease! The doctor, whom the mother trusted, even with her life, failed either to use the preventive treatment, or to properly treat the eye, when the infection did develop. How can he atone for this? Some day the mother will know that her baby's eyes were neglected, and regardless of the kind of infection, or the cause of it, the doctor will be blamed, and rightly so.

He may not be sued in the courts of the State, but he is tried and found guilty in the minds of at least three persons—the patient, who is now grown and knows of it, the mother, who by this time is old and gray, and his own conscience. Dollars and cents cannot be commanded in quantities large enough to overshadow this one instance of neglect, so only in one way can he even partially atone, and that is by using the preventive treatment on all other babies that he delivers.

If all the blind in Tennessee, caused by this infection during birth, were brought together, we would have a community of nearly 2,000 souls. What an army to silently proclaim the neglect or the indifference of the physicians of Tennessee! Sympathy for the blind is universal. We all shudder to see the eye of the old grow dim—eyes that have given fifty, sixty, or even seventy years of good service! Yet, we have a much deeper sympathy for the blind baby or child. It has wonderful possibilities! And to be deprived of its eyesight, possibly its greatest asset, a

*Read before Shelby County Medical Society.

handicap overshadows, which can never be removed. It is said that the optic nerve is many times larger than any of the other nerves, which carry information to the brain, and that seventy-five per cent of our knowledge passes in by the eye sight. Dr. Savage, of Nashville, my first professor on eye work, made a lasting impression on me, when he said to our class, that: "Every time we save a baby's eye, a great victory is won. Far greater," he said, "than a brilliant cataract operation." In the former case, we give vision throughout life, in the latter, for only a few years at best.

How shall we act to prevent this disease? The facts, which I have just given, are no longer subjects of discussion, but are universally accepted by all educated medical men. Why, as a common sense proposition, is not this simple, harmless, preventive treatment invariably employed? And why do we not stop this needless waste of human eyes? There are three reasons:

First. The physicians, nurses or mid-wives, either do not understand, or do not do their duty.

Second. The mother and father know practically nothing of this infection, and, therefore, are not alarmed until their child's eye sight is entirely gone.

Third. The State makes such a poor attempt to enforce this law.

Discussion of These Reasons.

First. Duty of physicians, nurses and mid-wives: Perhaps during a long experience, ex-physician may be so fortunate as to not have tending over many years of active service, a even a single case of ophthalmia neonatorum develop. While the total number of cases is large, the disease may occur very rarely, or never, in the practice of one man, yet, I have just said that this disease is no respecter of persons, it is equally no respecter of doctors, and, because you have gone thus far without using the preventive treatment, and, perhaps, have not had a single case, is no reason why you should continue to leave it off. You have just been lucky. Perhaps the next baby that you deliver, will develop this disease, then it will be too late to use the preventive treatment. You certainly subject the child's future eyesight to one of the most viscous eye

diseases. Strange to say that more eyes are infected from the delivery by physicians, than from the delivery by mid-wives. Mid-wives never use instruments, and do not make as many vaginal examinations as a physician, therefore, the baby's eyes are not pushed open during birth. And usually after birth the mid-wife is more careful about cleansing the baby's eyes and using the silver solution.

I have had only one case of ophthalmia neonatorum to come from the delivery of a mid-wife, and I have treated dozens of cases from doctors. In New York City there are more than 1,000 licensed mid-wives. If at any time they fail to use this preventive treatment, their license is revoked, and they are fined. Here a sample of a one per cent solution of silver nitrate is furnished by the New York Board of Health, and is given free to each doctor, and mid-wife, as needed. Massachusetts has as her slogan: "No babies needlessly blind after 1915." Many of the other States have laws and enforce them. Let us not wait for Tennessee to compel us to do our duty.

Second. The education of the parents: The father is usually the originator of this family disease, but you must not censure him too severely. Who has told him that his infection, if given to the mother, may be transmitted to the baby's eyes as it is passing through the birth canal, and, if developed, may produce blindness? Some physician is to blame. Perhaps he visited a "quack," who told him that his trouble was "no more than a bad cold," and that in two weeks he could fix him up all right. He is ignorant, and it is the physician's duty to enlighten him. Then the mother, even after the disease develops, thinks that her baby has been exposed to too much light, and that with breast milk the trouble will pass away in a day or so. She, perhaps, has never heard of this condition, and imagine, if you can, her feelings, when she finds that her baby is hopelessly blind, and that the doctor could have prevented this. The doctors of Tennessee must wake up! The Russell Sage Foundation for the Prevention of Blindness is scattering literature broadcast over the whole country. Mothers' Clubs are doing the same thing. Dr. Elizabeth C. Kane, of Memphis, who is

chairman of the Tennessee Federation of Woman's Clubs, tells me that upwards of 15,000 circulars explaining infant blindness have been mailed out to the mothers of Tennessee. These circulars (of which she has kindly given me several copies, which I now pass out to you), you will find a fertile field, and will go a long way toward stamping out this disease. Dr. Kane is also connected with the Russell Sage Foundation for the Prevention of Blindness, and she is, therefore, in position to know more about this disease than perhaps any other doctor in Tennessee. Suffice it to say that she is doing all in her power to stamp out this disease, here in our Southland.

Third. The inactivity, or the non-enforcement of this State law: The loss of a child's eye sight, not only makes the child a burden to the State, but removes from the community the usefulness of one of its citizens. It costs New York State one hundred thousand dollars each year to educate its blind children, or three hundred and fifty dollars per capita. If, as is sometimes the case, the blind citizen is dependent throughout a long life, the cost to the State is greatly increased, and will reach the enormous sum of ten thousand dollars per capita.

Tennessee pays upwards of fifty thousand dollars each year on her blind, and, yet, only twenty per cent of the State's blind derive any benefit from this. Eighty per cent of the State's blind are under or above school age. There are more than 5,000 blind citizens in the State of Tennessee. If Health Boards and officers would enforce the law we have, this number would be greatly reduced in the next ten years.

How to Care for the New Baby's Eyes.

Wash the lids with warm solution of boric acid, and then drop two drops of a one per cent solution of nitrate of silver in each eye. In a few moments this may be washed out by a boric acid solution. Have the nurse always bathe the baby first, and then do the mother's toilet. Be certain to watch the baby's eyes on the third and fourth days. If the inflammation appears, use the silver solution yourself once each day, and have the nurse keep the eyes clean and drop in two drops of a

twenty-five per cent solution of argyrol every fifteen or thirty minutes. If any signs of corneal ulcer, use one grain of atropine to the ounce of distilled water and instill one drop three times each day. Keep up treatment, even after all signs of the pus has disappeared. The silver salts, argyrol, and protargol are, also, used as prophylactic measures, and are claimed to be just as efficacious as the silver solution. You must remember that this condition occurs once in every two hundred births, and that only two-thirds of the cases of ophthalmia neonatorum are due to gonorrhoea. That the other third may be due to the vaginal discharges, which may be a mixed infection, and not contain any gonorrhoeal germs at all. Therefore, any baby, if its eyes are opened during birth, may be infected. Now do not be surprised, if the mother asks you, "Doctor, do you use any preventive treatment in the baby's eyes?" You must remember that fifteen thousand mothers in Tennessee are already informed about this condition, and they will pass it on to others. In no place is the old adage, "An ounce of prevention is worth a pound of cure," more applicable. Our mission, therefore, should be that of teaching the people how to prevent diseases, as well as trying to heal diseased conditions, which already exist.

THE TREATMENT OF WOUNDS.

Duncan Eve, Jr., M. D., Associate Professor
of Surgery, Vanderbilt Medical College.
Nashville, Tenn.

There is no subject of greater importance to the surgeon in active practice than that of wound healing. Every one has his own method of treating wounds and considers his as satisfactory as any others. Nevertheless, it has been my good fortune to have dressed several thousand wounds in the past ten years, and during that time have seen many changes in the treatment of wounds. I can remember that irrigation of wounds with antiseptic solutions was the routine. It is no longer necessary to denounce the use of strong chemical solutions on a flesh wound, because they have been so generally abandoned, but

they are still being used in infected wounds to a slight extent. Frequent irrigations of a suppurating wound will not stop suppuration and they will delay the granulating process. You can take two infected wounds on same person; one treated with irrigations of bichloride or carbolic solution and the other wound without, and the wound which was not irrigated will always do much better. Harrington has shown that it requires a ten minutes' exposure of a 1:1000 bichloride solution to kill the staphylococcus albus, also has demonstrated that even a 1:3000 solution will damage the healthy tissues. "Kill the germs" was long the only war cry of surgery, and without thought as to whether pathogenic organisms were actually present or not. A large majority of surgeons until recently have subjected every wound without reason to action of the most powerful antiseptics and when healing failed to occur and the wound becomes infected, then the blame was put on the suture material.

We have overlooked the evils of powerful antiseptics in our effort to "kill the germ." Iodine and alcohol are the most reliable and the most harmless of antiseptics. I have used them exclusively for the past five years in all my surgical work when an antiseptic was required. I have never had any reason to regret it. During that time I have not used bichloride or any form of any irrigation. In regard to alcohol, I would like to quote the following from *The American Journal of the Medical Sciences* of March, a year ago. "The effect of alcohol in various dilutions in killing pyogenic organisms. Seventy per cent (by weight) alcohol far excels all other solutions in power, being 30 times as effective as 60 per cent, and 40 times as effective as 80 per cent alcohol." Beyer states that solutions under 60 and over 80 per cent are useless for disinfection for practical purposes.

We may classify wounds into two great classes:

- A. Traumatic:
 - 1. Incised.
 - 2. Lacerated.
 - 3. Granulating.
- B. Operative:
 - 1. Clean.
 - 2. Infected.

My method of preparing a traumatic wound is as follows: Sponge off gently with benzine so as to remove the grease and dirt, then use green soap and sterile water, shave if necessary and wipe off with sterile water, and the wound is ready for suture or dressing. Frequently we see a wound reasonably clean, and such wounds I only use Tincture of Iodine and suture or dress. Also lately I have used Dr. Bastianelli's method. It is a very good method for emergency cases, especially cases of injury to the hands and feet.

In regard to the dressing of an incised and lacerated wound. The patient, almost without exception, asks if there is no powder or salve to be applied to such wounds. They often object to nothing being put on them. I think any and all dusting powders and salves are found to be surgically unclean for a fresh wound and are harmful by retaining secretions and thus inviting infection. We have learned that wounds heal just as quickly without the powder; therefore every unnecessary application to a wound is meddling with nature's process, and meddling surgery is bad surgery. The only application necessary for the above wounds is dry sterile gauze and a thin sheet of cotton—the amount of cotton used will depend upon location and extent of the wound; enough should be used to exert constant pressure and to lessen the discomfort due to tight bandaging. In the lacerated wound I sometimes use 10 per cent of sterile Balsam of Peru in castor oil, which will aid in the removal of gauze and give freedom from pain when the first dressing is applied. These wounds are not dressed until the fourth, fifth or sixth day and if possible don't apply any water to them. If you are forced to use a solution to remove the first dressing, then use saline solution, or a little hydrogen peroxide.

Granulating Wound.

This develops in all wounds in which primary wound healing has been prevented by the accumulation of blood or wound secretion or by extensive necrosis of the tissues following trauma or infection. In treating such wounds, gently wipe off the wound with gauze, and if very much odor, use peroxide and permanganate of potash. As a dressing

I use Balsam of Peru; if it is a very large area I am very fond of Scarlet Red. I have also found Beek's Paste makes a very good dressing for a small granulating wound. For leg ulcer nothing is better than Ulma dressing and adhesive plaster. If the wound has profuse granulation, burn them down with nitrate of silver. The keynote for a granulating wound is uniform pressure.

Operative Wound.

The only application necessary is dry sterile gauze. The wound should be examined about the fourth or fifth day, or due to the patient's general condition. If a stitch abscess, remove the suture and use Tincture of Iodine.

Infected Wound.

This should be opened freely and all hopeless tissue should be cut away and doubtful tissue retained. It can be cleansed by touching or wiping the parts with dry gauze. Such wounds will heal more promptly without irrigation of any kind. Every few days wipe with Tr. of Iodine. The wound should be dressed daily until the infection is controlled. Frequently in the first few days of an infected wound that is draining a good deal, the use of Wright's Solution is very good. The solution is Sodium Citrate gr. ii Sodium Chloride gr. xx to one $\bar{5}$ of water. The Citrate prevents coagulation and the Chloride produces irritation and keeps up a continuous flow of serum.

Rest for the wound is essential for the most rapid healing and is secured by compression, immobilization, position and by anodynes.

In regard to cellular infection and lymphangitis. The most striking results have been obtained by the Ochsner's Treatment: first, two $\bar{5}$ of castor oil; second, rest not only for the wound, but also the patient, because if the muscles are not relaxed, they make pressure on the lymphatics and veins and stop somewhat the return circulation and the muscles tire the patient unnecessarily and reduce his resistance. Third, the dressing. Place 20 or 30 layers of gauze around the limb and moisten with a mixture of alcohol, one part and Sat. Sol. of Boric Acid three

parts, and put on every three or four hours warm. Ochsner has repeatedly withdrawn a 60-minum syringe full of pure streptococcus pus from a septic patient that had had this dressing on for several days, then injected from 10 to 40 minims of this pus into the peritoneal cavity of a guinea pig or even a mouse, without causing the death of these test animals. Ordinarily from 1 to 5 minims of pure streptococci pus practically always kills either of them. He found easily quantities of boric acid would be present in the urine within one hour after the application of the dressing. Ochsner also says boric acid does not seem to have much power in suppressing the growth of pathogenic bacteria, but he is fully convinced it has great power in reducing their strength.

Let me insist upon the very simplest method of treating these injuries, avoid the strong chemical solutions, powders, irrigations and less frequent dressings, also keeping the fingers out of the wound, and give nature its best chance by allowing the parts to remain at as complete rest as possible.

THE TRIUMPH OF THE AGES.*

By M. G. Price, M.D.,
Mosheim, Tenn.

From the day of man's first disobedience and the fruit of that forbidden tree that brought death into the world and all our woe, man has never ceased his downward trend and steady march to the bad—an outcast from his Father's face—a child with the light turned out—in the darkness he stood helpless as a babe, facing, unprepared, an unknown fate.

In the language of the day, it was "up to him" to extricate himself from the cruel environment which surrounded him as a consequence of his own faults. Equal to the occasion, he sought out many inventions, the story of which is the story of the history of the achievements of humanity, and is fraught with intense interest to every student of anthropology.

*Read before the Greene County Medical Society, January 6, 1913.

A blasted, withering monument of retributive justice, he wandered upon the face of the earth, bearing upon his brow the curse of his Maker and in his heart the stinging memory of his former ecstatic bliss. Mighty was the burden upon his shoulders, enormous was the undertaking lying at his feet.

A new world, rugged and rough, inhabited by wild beasts and clothed in briars and brambles, awaited his care and stood in his way to success. The wild beasts howled wildly on the wilder mountain tops, and the wild birds screamed in their course, while the venomous serpent crawled from every crack and cranny of the craggy cliff and lay concealed in the waving grass ready to dispute his passage at every step.

Discouraging? Yes, but it acted as a goad to excite him to action. These things must needs be overcome; he must live, he must carve out of his environment his own destiny.

"**I must**" was written in letters of living light upon all things; it stalked upon the mountain top, it mirrored in the rippling waters, all radiant it glittered upon the floating clouds, and the lightnings with a pencil of fire wrote it in letters of dazzling brightness upon their somber bosoms.

I must win back the earth cursed for my sake; her mountains must yield up their hidden treasures; her fertile plains must groan with the burden of the teeming harvest, and the desert place must bloom as a rose. All must be subdued; the torrents must be harnessed to the wheels of industry, the stately ship must sail the fathomless depths of air as safely as upon the ocean's bosom, the lightning's forked tongue must become sonorous with the human voice, and at the call of man, from out the sepulcher of the ages, those long since silent must graphophonically speak to us in resurrection tones.

In due time men multiplied upon the face of the earth and their needs must be a form of society—government—must be controlled, their best interests must be conserved, but being social and gregarious, the family became the nation and the father the patriarch or king; families, by consanguinity or affinity, became united under one head or chief. Thus came the tribal form of government; tribes united under one ruler at first, form-

ing despotisms, then constitutional monarchies, and finally our own great democracy—rule of the people—a living exponent of the great fact that people must rule.

Sail on, O Ship of State,
Sail on, O Union, strong and great.
Humanity with all its fears,
With all the hopes of future years,
Is hanging breathless on thy fate.
We know what master laid thy keel,
What workman wrought thy ribs of steel,
Who made each mast and sail and rope,
What anvils rang, what hammers beat,
In what a forge and what a heat,
Were shaped the anchors of thy hope.

Fear not each sudden sound and shock,
This of the wave and not the rock;
'Tis but the flapping of the sail,
And not a rent made by the gale!
In spite of rock and tempest roar,
Sail on, nor fear to breast the gale!

Our hearts, our hopes, our all with thee,
Our hearts, our hopes, our prayers, our tears,
Our faith triumphant over our fears,
Are all with thee—all with thee.

The elements conquered, land and sea subservient to his every purpose, man must conquer himself. "There were giants in those days," and they served the great purpose of preparing the earth for the development of a feeble but a more noble race—for the triumph of the intellect, after the passage of man with muscle and brawn and nerves of steel. "There was not found a man," but the world was ready for his coming; developments must take another shape from self-sustenance and self-protection he must look to his intellectual being, its worth, its capabilities and its work.

The triumphs of the ages are within the pages of man's intellectual developments—at first, little, insignificant steps they were, "but line has been piled upon line, precept upon precept, here a little and there a little, until the sum total is seen in the colossal temple of the achievements of the human intellect."

The beginning is hardly worth mentioning, yet it is the very first foundation stone of the mighty superstructure. Intellectual development is written in the growth of language, at first probably no more than the

lowing of the kine or the song of the birds to one another. Yet slowly and progressively it is added to until it is full of story, song and poetry. When a kind and beneficent Creator filled man's mind with ideas and his mouth with speech, he meant for him to give articulate expression to these ideas, and at the same time he formed for him the rudiments of a spoken language—written language is the invention of man. Rude it may have been, not much more than that in all probability in use among the lower animals, but man could and has improved upon it, and in the history of this progress is written the intellectual development of the race.

His ideas at first centered about the simplest and the most common things of earth—things that he ate and wore and saw—gradually his mind developed with the brightening light and dawn of intellectual day. Man looked beyond himself and saw the mountains with their snow-clad peaks, slowly creeping glaciers and thundering cataracts. The varied scenery of river, hill and dale and every widening plain filled his mind with admiration of their majesty and grandeur; from these beauties of nature he lifted his eyes heavenward and the sun, moon and stars caught his enraptured gaze; beyond he looked into fathomless space, and there—all and beyond all—he caught a glimpse of the great Creator of all. Amazed he stood a mute worshipper of the Father of all.

The mighty thoughts that filled his mind must needs burst the bands that confined it, and then it was free to soar to regions beyond, and a little poem, popular in childhood days, comes to mind as expressive of the first new thoughts that came to his inquiring mind:

Twinkle, twinkle, little star,
How I wonder what you are,
Up above the world so high
Like a diamond in the sky. Etc.

Sober second thought goes to work on these tenants of the skies. Cold mathematics are developed from the inquisitive, growing brain. Slowly astronomy makes its way from the mind of man, and with the measuring-rod of an exact science the paths of the planets

and their movements are calculated, and the great Halley made out a railroad time-table for his comet and mathematically predicted with merrily certain when it would return. Thus we trace the development of the intellect of man from the very smallest beginnings to the mightiest triumph of the human mind.

Man in his primeval estate was a savage, with but little idea of right and wrong—might was right and was enforced with the bludgeon. But compassion for the weak suggested mercy and toleration. Gradually the rights of others dawned upon his darksome mind, from this small basis, expanding moral vision gradually covered all the virtues and vices. The powerful could murder the weak, the powerful could rob the weak, but the golden rule, a result of moral development as well as the gift of revelation, soon forced itself on the consideration of man, and he at once began to think of doing to others as he would that they should do to him.

Then came the Book of Revelation shedding its beneficent light into man's soul, and from the time it was said that the "seed of the woman should bruise the serpent's head," a glorious stream of divine light has been pouring into man's soul. Then came the fulfillment of that prophesy in the person of the Christ, "Who spake as never man spake, and as one having authority." Taking away much of the asperities of the ceremonial law and introducing the law of love, which is embodied in the commandment, "Love the Lord thy God with all thy soul, mind and strength, and thy neighbor as thy self."

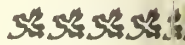
The life of the Christ is the acme of the higher moral and spiritual life as it is believed and lived in this world and is embodied in His famous saying:

"It hath been said, an eye for an eye and a tooth for a tooth; but I say unto you that ye resist not evil."

How contrary to the usual and human way of dealing with such matters, and when we are so far enraptured with the Christ and His teachings that, like Him, we will consent to go about the world doing good, then will we have reached that standard of perfection toward which our race is tending.

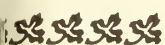
Great advancement has been made by man

TO OUR



¶ At the last meeting of our State
city of Nashville, a record attended
the unprecedented number of 45
break all previous records at the
that you make your preparations
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time. Again, let us urge that

MEMBERS!



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in the physical care of himself. The development of medicine and hygiene has been like all other departments of knowledge—slow—but glancing back through the ages, it progresses is phenomenal. Primitive man had but little knowledge of the healing art; when ailing he was left to die without sympathy and attention—but behold the change! Warm friends and hired nurses attend his every wish and minister to his every want; stately edifices with turret and tower, emblazoned battlement, marble columns and gilded domes, snow-white beds and polished floors, are ready for his reception.

Fevers that once racked and scorched his frail body are now held in check and finally cured by remedies discovered by the friends of the sick. Wounds that festered and stand in laudable pus, for want of proper care, are now rendered sweet and aseptic by the application of proper remedies. The surgeon's knife now goes without danger, when only a few years ago patients almost universally died, all owing to the discovery of bacteria and their method of destruction.

Diseases such as tetanus, diphtheria, small-pox and some others, once the remediless scourge of humanity, have been rendered powerless before the advancing wisdom of medical men. And the final and crowning triumph is not yet—the Great White Plague must be mastered, conquered, driven from the face of the earth and from among the children of men. How this is to be accomplished does not yet appear, but with the oncoming prescience of the deadly rifle, the wisdom of the wise is aimed at it, and in the course of a few years the greatest foe of man and accomplice of death will be driven from the face of the earth.

The prevention of marriage of consumptives, the elimination of heredity, the rendering immune of men and women, and the isolation of the diseased may be the route taken to the consummation of this most devoutly to be wished for object.

Bringing this matter of progress down to now, we were not surprised to read the words of Mr. Taft in his welcome address to the International Congress of Hygiene and Demography. He says at one point in his address—concerning preventive medicine—what we

learned in the Spanish-American War about this was worth all the war cost—and it's even so. As a result of this war we have the development of the mosquito theory, the eradication of yellow fever from Cuba, the possibility of eradicating malaria in the tropics and at home, the practical solution of the problem of typhoid fever in military camps, etc.

So, taken all in all, man has advanced very far along all lines, and his redemption from the asperities and hardships of his environment has made wonderful progress. Much of this he has of himself been able to accomplish and much has been done for him by a Beneficent Father, and I look forward to the day when this world shall become the paradise of man redeemed from cruel and relentless circumstances, where he may advance along all lines ad infinitum, and the praise of God shall continually fill his soul and be upon his hallowed and sanctified lips.

NASAL POLYPI.*

By R. B. Nelson, M.D.,
Memphis, Tenn.

After an examination of the nose of a patient and finding polypi present one naturally wishes to know whether or not a polypus is an inflammatory product and must be regarded as a symptom such as dropsy, or whether it is a neoplasm with the characteristics of any other new growth of unknown origin with no known function.

Certainly a search in the works of higher authorities fails to give one a positive answer, some maintaining that polypi are due to a purulent discharge from an inflammatory process found in either the ethmoid, sphenoid or frontal sinus or the antrum of Highmore, while the experience of others, whose opinion must be equally respected, teaches that the tumors are primary to the infection. However, all are agreed that a myxoma or a nasal polypus is usually a pedunculated connective tissue tumor most often found growing from

*Read before Middle Tennessee Medical Association, May, 1913.

the middle turbinal body, the uncinate process, or ethmoid cells, although one sometimes finds them attached to the floor of the nose.

My observation obtained from private practice and that of my connection with the Ear, Nose and Throat Clinic of the University of Tennessee has been that they are usually associated with an infection of one or more sinuses. Also the fact that negroes are less prone to suffer from this malady than whites, for of the many hundreds of them that I have examined and treated in the Clinic suffering from an infection of one or more sinuses in not one instance have I discovered the presence of a polypus. The subject is not mentioned in the text-books and may be a coincidence, but in view of the fact that so many were examined and treated it does seem passing strange that there was no evidence of this malady. However, I mention it for what it is worth.

The tumor is undoubtedly formed by an inflammatory exudate occurring beneath the mucous membrane. Stasis then takes place in the vessels, with a transudation into the tissue, with the result that a polypus is formed. Some polypi are hard and fibrous and others soft, they are usually multiple and one is amazed at the size and number. Dr. Loeb, of St. Louis, reports having removed 308 at one sitting. Heat or cold has little effect upon them, but they are very hygroscopic in character, and on rainy days or during moist weather they increase in size to the great discomfort of the patient.

Of the two varieties sessile and pedunculated, the latter is usually the most common and are more easily removed, while the former are more prone to recur and become sarcomatous.

Ill health if associated with this trouble to any marked degree is usually due to the consequences of nasal occlusion with attendant mouth breathing, causing an irritation of the pharynx, bronchial tubes, etc.

Repeated attacks of coryza, also the lodgment of a foreign body remaining for some time have been given as a cause of polypi.

The presence of this growth in the nose is manifest in many ways, the patient's attention being attracted frequently by many colds.

No sooner does one attack come to an end than another follows closely on the heels of the first. However, the location has much to do with the symptoms.

If pedunculated and hanging in the lower portion of the nose a sensation of a movable foreign body is felt, the patient sniffs and blows it back and forth at will.

If sessile it cannot be moved and causes a feeling of tightness and fullness across the bridge of the nose, and if situated high up in the nasal tract may cause pressure on the nasal duct with resulting eye symptoms. Frequent headaches and very often extreme dizziness, especially when stooping, is one of the first symptoms complained of, but to the specialist the most characteristic symptom, and often one by which he makes a diagnosis before the patient has begun to unburden himself of his many troubles is his peculiar voice. There is an entire loss of nasal resonance, giving a peculiar nasal twang that no other obstruction of the nose exactly simulates.

The function of the olfactory nerve is very quickly effected, the power of smell is greatly impaired and often totally obliterated, the size and number of the growths, of course determining the extent of lessened olfaction.

Of the reflex manifestation of this trouble, cough and asthma present themselves most prominently, the cough is sometimes very severe, becoming especially so on account of the patient's inability to breathe through the nose, which always causes a chronic pharyngitis. This condition, associated with the reflex cough, keeps the throat in a chronic state of irritation.

The higher the tumor is situated in the nasal tract the more prone is the patient to develop asthmatic symptoms.

Ballanger and others report the cure of patients so sorely afflicted with this trouble that they were compelled to sleep sitting up for three months at a time. The relief of cough and asthma was instantaneous after complete removal of the growth.

The treatment of the condition lies wholly in the field of surgery and procedure less than the complete removal of the growth by surgical interference is an absolute waste of time.

Not only is the growth to be removed, but the point of attachment and to a considerable extent the parts adjacent to it are also to be obliterated; in fact, it is sometimes necessary to remove a part or all of the middle turbinate together with ethmoid cells in order to erase the diseased structure producing the malady. If the parts to which the growth is attached is not badly diseased, cauterization after removal is all that is necessary. It is needless to state that all associated sinus involvement must be treated and cured in order to prevent a return of the polypus.

In conclusion I wish to remind you of the enormous size to which the growth can attain. A few months ago a young man from a small town in Arkansas presented himself for treatment for a nasal trouble. On examination I found the right nostril completely occluded. Judging from the external appearance of his nose I had expected to find not less than fifteen polypii present, the anterior one was presenting at the ala of the nose. By use of the laryngeal mirror I detected the posterior one protruding three-quarters of an inch in the naso pharynx. After the operation was over and all polyoid tissue removed I had snared only three.

Book Reviews

BOOKS RECEIVED.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Vol. IX. *Skin and Venereal Diseases, Miscellaneous Topics*, edited by W. L. Baum, M.D., Harold N. Moyer, M.D. Series 1913. Price, \$1.35. The Year Book Publishers, Chicago, Ill.

The Practical Medicine Series. Volume X. *Nervous and Mental Diseases*, edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Polyclinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School; Ex-President Chicago Neurological Society. Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. Series 1913. Price, \$1.35. The Year Book Publishers, Chicago, Ill.

Electricity in Diseases of the Eye, Ear, Nose and Throat, with illustrations, by W. Franklin Coleman, M.D., M.R.C.S., England, Ex-President of, and Pro-

fessor of Ophthalmology in the Post-Graduate Medical School of Chicago; Ex-President of The Ophthalmological Society of Chicago; Professor of Ophthalmology in The Illinois School of Electro-Therapeutics, Chicago. Publishers, The Courier-Herald Press.

BOOKS REVIEWED.

Principles of Surgery, by W. A. Bryan, A.M., M.D. Professor of Surgery and Clinical Surgery at Vanderbilt University, Nashville, Tenn. W. B. Saunders Co., Philadelphia.

The importance of a thorough understanding of the principles of surgery was never so insistent as at the present time. Indeed, almost every day brings forth some surgical treatment for diseases formerly classed as medical; a fact that physicians, as distinguished from surgeons, are somewhat slow to admit or accept. The treatise we have attempted to review, will do much to clear the atmosphere of many doubts that have led to misunderstanding and miscomprehension as to diagnosis, and the application of correct surgical principles. While the book is styled "Principles of Surgery," it really covers a much larger field, and will be found useful in every department of medicine.

The book properly begins with a chapter devoted to surgical bacteriology, included in which is found a clear and lucid explanation of immunity, and nature's methods of creating same.

The chapter on Asepsis and Antisepsis, while offering nothing new, is unusually complete.

Chapter III, discuss the process of healing, and is beautifully illustrated with original photographs and illustrations of skin grafting, bone grafting and transplantation. Passing over many excellent chapters that deal with inflammation, suppuration, sepsis, gangrene, ulcer, etc., we come to Chapter XVII, which deals with syphilis. Dr. Bryan properly includes this disease in a work on principles of surgery, for its relation to many surgical conditions is so intimate and manifest that a work may be said to be incomplete which does not include it. However, we are constrained to take issue with him relative to Salvarsan and Neo-Salvarsan as curative agents, as well as to his rather large group of contraindications to their use. This chapter abounds in interest and deserves careful study. Its teachings are of the best, regarding the various surgical complications of this disease, which so frequently taxes the skill of the surgeon to the extreme.

Space will not permit a critical review of the entire work of 677 pages, but suffice it to say, he surveys the whole field with judicial calmness and conservative judgment. There are many chapters of great interest and importance, especially the one on tumors, which is handled with admirable skill by the distinguished author, but the limitations of this review preclude comment upon them.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, Jackson Building, Nashville, Tenn

FEBRUARY, 1914

EDITORIALS**THE STATE MEETING.**

Let us again urge you to attend the next meeting at Memphis on the 7th, 8th and 9th of April.

These meetings are of untold benefit to each and every member who avails himself of this opportunity of meeting his professional brethren, and exchanging ideas and opinions with them, both in the hall during the scientific sessions, and at the table while recreation is in order, and in association at other places of rest or relaxation. Life-long friendships are often made and prejudices are just as often wiped away, when we come to know each other better, as we do while attending medical meetings.

The Program Committee is already at work to set before you a feast of mental food, the best that this country and this State affords. They take this opportunity to announce that acceptances have been received from Drs. Joseph C. Bloodgood of Baltimore and John Phillips of Cleveland. The former will deliver a lecture upon some phase of cancer, which is today attracting more attention than any other disease in medicine or surgery. The latter, who is on the staff of Lakeside Hospital, in Cleveland, and who is well prepared to speak authoritatively, will handle the subject of arterio-sclerosis, another subject which to the surgeon and internist alike will be replete with interest. The program shall comprise papers from the best in our own great State, which announcement should be sufficient to attract the largest attendance we

have ever had at any previous meeting. Let us urge again that you make your arrangements to attend.

STATE BOARD OF HEALTH.

As an evidence of the splendid work which is being done throughout the state by the State Board of Health, we take from the Fourth Annual Report of Dr. Olin West, State Director of Rural Sanitation, the following interesting items:

First, we note that up to 1913, 24,459 were examined, and during the year 1913, 26,299 were added, making a total of 50,758 cases in which microscopic examinations were made; the percentage of hookworm infections prior to 1913 were 38.49; during 1913, 27.9; percentage for the 50,758 cases being 33.02. This enormous percentage is evidently conclusive, and should convince any fair-minded physician, that hookworm infection is no longer a myth.

An effort to establish an estimate of infection in various counties was also undertaken, and an infection survey was made in 34 counties prior to 1913, and 13 during that year. At least 200 rural children, between the ages of 6 and 18 were examined in each county, the number of children examined being 8,290; the number found to be infected was 3,733, and the percentage of infections 45. This interesting feature of the report shows the ratio or percentage of infection higher in children. We regret that the relative ages of the 50,758 cases, with an infection percentage of 33.02, was not given.

A sanitary survey, covering 41 counties, was also made for the purpose of ascertaining conditions with references to provision against soil pollution. At least 100, and often more than 200, houses were inspected in each county; the total number of houses inspected being 4,930.

The educational advantages derived from

such a systematic campaign must surely appeal as being of the highest practical order.

We are also pleased to see, from this report, that, through the influence of the State Board, the County Courts are rapidly being induced to make appropriations for the establishment of dispensaries, where free examination and treatment may be obtained. The number of counties which have already made appropriations being 29, 15 of which were made during 1913, in which 11,412 cases were diagnosed and treated prior to 1913, and during that year 6,905 were added. The Field Staff and physicians who reported, treated 15,309, to which should be added 7,259 during 1913.

The importance and magnitude of such work cannot be overestimated, and we heartily endorse and commend the Rockefeller Commission and the State Board upon the splendid showing in the report above quoted.

MEDICAL ABSTRACTING.

The problem of keeping up with the rapid advances in medicine, surgery, and the specialties, is, no doubt, a serious one to those members of the profession who are ambitious enough to desire to do so. The hurried life of a busy practice leaves often too little time for the study and thought necessary to keep the doctor on the high plane of intellectual development his patients have a right to expect of him, and often do, wisely or unwisely.

While it is not the purpose of this article to discuss the many angles of this problem, we are constrained to remark, that whether the physician has this innate desire to be aware of the latest views in regard to the many phases of medicine and surgery, he owes this to his patients more than he does the medicine he offers them to relieve their complaints. This problem, no doubt, concerns the profession of Nashville to no little degree, so that when one of the members of the Nashville Academy of Medicine suggested that the current literature in medicine, surgery, the specialties, and allied topics, be abstracted and read at each meeting of the Society, it was received enthusiastically. It was also pointed out that while most of the papers read at local society meetings were merely a more or less complete review of the literature

on the particular subject, why not call them such? Consequently a committee was appointed from the Academy to devise ways and means for the inauguration of this abstract plan. After mature deliberation, this committee recommended that the regular order of business, viz., the reading of an essay, and the report of cases with discussion on each, be continued, and after these to have the abstracts of the literature. The President was authorized to appoint one man, to serve for a period of three months, on one of the eleven branches into which the literature was divided by the committee, and to report at each meeting night briefly, and in writing, the substance of any or all articles that came under his observation in his particular department. By this method it is hoped that a complete review of the current medical and surgical literature will be brought to the attention of the members of the Academy each week.

We would strongly urge this plan for serious consideration to the other county societies, to the end that they adopt this, or a similar plan, for their mutual betterment. We are aware that Davidson County, with its large enrollment of members who have varied interests in the practice of medicine, and allied branches, and the society's library, which contains about every journal published in English, can accomplish this task, possibly, easier than the smaller society, but we believe that this, or a similar plan, could be adopted by every county society of the state, greatly to the advantage of its members.

On account of the infrequent meetings of the smaller societies, and the limited membership, one topic, as General Surgery, or Obstetrics, or Therapeutics, could be assigned to a member for the entire year. Again it might be advantageous for one member to subscribe for a journal which is not taken by another member, or for the society as a body to subscribe for a representative journal on each subject to be abstracted, and to be the property of the society. However, these are but suggestions, and each county, no doubt, has little details which can be best solved by the society itself.

That the plan is practicable, the interest manifested in the Nashville Academy of Medi-

cine, proves without a doubt and, as said above, we suggest this plan to the other county societies for their serious consideration.

THE DOCTOR'S RIGHT.

We are living in the greatest of all ages, the twentieth century. It is our privilege to have seen the complete development of the steam engine, and the railway, the completion of the Panama Canal and the Hudson River tube, the development and practical use of the aero-plane, the invention and practical application of the telephone and the Marconi wireless telegraphy. The production of the automobile and various other gas machines, too numerous to mention. The application of electricity and gasoline as motive power has been so extensive that this age has been called the "motor age."

While due credit and recognition should be given for these wonderful achievements, let us not forget the even more wonderful achievements of the medical profession during this time. We have seen the discovery of the Rontgen ray, with the unlimited possibilities for the future. The discovery of antitoxin, vaccination against typhoid, and the preparation of other vaccines that are yet in their infancy. The introduction of Salvarsan with its magical effects on syphilis, malaria, etc. No less an authority than M. V. Edison, in speaking of Salvarsan, says that it is one of the greatest discoveries of recent years. The discovery of the mosquito theory of yellow fever and malaria and other insect-borne diseases. These with the recent discovery and manufacture of radium with its wonderful possibilities for the cure of cancer constitute only a part of what the medical profession has done in the past few years. The surgeon has kept abreast of the times by his many ingenious operations, operations that a few years ago were considered impossible, the repair and removal of organs, transplantations of organs, and of bone, and even the possibility of the transplantation of an extremity.

Now, would it not be more fitting to call this the "Medical age?" No profession, organization, or body of men has done so much for humanity in recent years as our's. The laity do not appreciate the medical profession as they should. The reason is a simple one.

They do not know what we are doing, or have done. They like us rather than appreciate us. The public should be made to recognize what we are doing for mankind, at what cost, the time expended, and in some cases, the forfeiture of life. This can only be accomplished by thorough organization. This is the day of organization. We must organize for the mutual protection of the profession and the people.

The very reason that so many cults, Osteopaths, Chiropractics, Christian Scientists, are thriving today, is because of their splendid organization and our lack of organization. We have the best and the people should have the benefit of it rather than be duped and suffer at the hands of these impostors, that have one hundred fallacies in their treatment, etc. for every one good. There are more physicians in this state that do not belong to the Tennessee State Medical Association than there are members of it. All of those that are eligible should be brought into the Association. They should understand what it will mean to them to become a member of this Association. Each one of them should be a booster. He should boost the medical profession in general, the State Association and the American Medical Association. The public should be made to appreciate the physician, appreciate his material worth. Until this is done the physician cannot expect to be properly recompensed for his labor. In the past few years every commodity, with few exceptions, has advanced in value. All wages and salaries have increased, yet the physician charges practically the same that he did twenty-five years ago. The fee bill is unchanged in nearly every county in this state. Unless this condition is changed the physician cannot secure sufficient funds to keep abreast of the times.

"It is 'The Doctors' Right' by virtue of their achievements in the past quarter of a century that their work be appreciated as much as that of the laymen and that they be properly compensated for it.

Let them get together, organize, unionize, or only the smallest part of them will receive the proper reward for their ability and labors.

E. T. NEWELL, M.D.

DR. WILLIAM G. EWING

BORN OCTOBER 8, 1848

DIED JANUARY 14, 1914

The death of Dr. William G. Ewing, which occurred at his country home near Nashville January 14th, 1914, removed from the State one of its distinguished physicians. Born on a farm near Nashville of W. B. and Martha Grove Ewing on October 8th, 1848, he lived to add honor to the name of Ewing—a family already illustrious in the history of Middle Tennessee. Dr. Ewing lived on his father's farm until after the close of the war, when he removed to Nashville to begin his career as a clerk in a drug store. He graduated in pharmacy in Philadelphia, and after continuing his work as a pharmacist for some time, he was persuaded by Dr. W. L. Nichol to study medicine. He consented to do so and entered the Medical Department of the University of Nashville, sitting at the feet of those masters: Paul F. Eve, the Senior, the elder Briggs, Maddin and others, graduating in 1874. He soon became a member of the faculty of his Alma Mater, where by his superior worth and energy he finally became Dean and Professor of Materia Medica and Therapeutics, which position he held until he resigned in 1909.

In 1882 Dr. Ewing married Miss Sarah Adams. From this marriage his only child was born, which died in early life. After the death of his first wife, which occurred a number of years ago, he married Mrs. Lizzie Craighead, who survives him. One brother, Mr. Charles M. Ewing, also survives him.

Up to the time of Dr. Ewing's withdrawal from active practice, he enjoyed a large and lucrative following. His large experience, coupled with his unusual knowledge of drugs and intuitive skill, made him a physician of no mean ability. This ability, with his courteous manner and his high regard for the ethics of the profession, made him a consultant in great demand.

In the life of Dr. Ewing there is another example of one rising to eminence largely by his inherent worth. From a farmer boy he rose in successive steps of clerk, pharmacist, physician, teacher, to the very highest positions in his profession. He retired amid an abundance of worldly goods and kindest feelings of his host of friends, to spend his last days on the farm in joyous recollection of his youth. He added to the sum of human kindness, and the world is better that he lived.

IN MEMORIAM



DR. WILLIAM G. EWING

News Notes and Comment

We regret to learn of the recent loss by fire of the office of Dr. B. P. Lester, of Woodbury, Tenn. The Doctor, we are informed, had no insurance.

Dr. Olin West, Chairman, Sanitation Committee, State Board of Health, delivered a lecture at the Y. M. H. A. on "Public Health," Sunday, January the 13th.

The Federation of State Medical Boards of the United States, will be held on Wednesday, February 25, 1914, in Chicago, in the Congress Hotel. Members of the Tennessee State Medical Association are cordially invited to attend.

We are informed that the Hosmer Hospital of Dyersburg, which has been in course of erection for the past several months, is nearing completion, and we understand that it will be a modern hospital in every particular. The physicians of Dyersburg are to be congratulated upon their energy, and the citizens of this thriving little city, we are sure, feel very grateful for the benefits of such an institution.

We regret to learn of the exciting experience of our esteemed contemporary, Dr. W. G. Bogart, of Chattanooga, who was held up by two negroes and robbed of some cash and his watch. One of the negroes has been captured, and in his confession says it was their intention to throw the Doctor in the Tennessee River. Dr. Bogart was returning from a call at Bridgeport, Ala., and in order to save time boarded a freight train, when he was held up and robbed.

Fellowship was conferred upon the following Tennesseans by the American College of Surgeons at their last meeting in Chicago, in November, 1913: Drs. John M. Maury, W. F.

Black, J. A. Crisler, E. C. Ellett, Battle Malone, J. L. Minor, F. D. Smythe, of Memphis; S. R. Miller, of Knoxville; W. A. Bryan, W. D. Haggard, M. M. Cullum, Duncan, Eve, Sr., M. C. McGannon, R. A. Barr, L. E. Burch, R. E. Fort, Hilliard Wood, Robert Caldwell, William M. McCabe, of Nashville.

The Tenth Annual Conference on Medical Education and Public Health Education and Legislation will be held at the Congress Hotel, Chicago, Monday and Tuesday, February 23 and 24, 1914. This Conference is held under the auspices of the Council on Health and Public Instruction, and the Council on Medical Education, of the American Medical Association. All State Licensing Boards, State Boards of Health, State Medical Societies and other organizations interested should have representatives present.

The jury in the case of J. H. Fields against Dr. W. B. Lee, of Nashville, returned a verdict against the defendant for \$250 and costs. The accident that prompted the suit happened last summer on the Nashville Pike, about five miles from Lebanon, when Mr. Fields' two grown daughters and two smaller children were in a buggy returning home from church, when, it is claimed, that Dr. Lee met the buggy in his automobile. The horse became frightened and the buggy was overturned and some of the occupants sustained painful injuries.

"Corpus Luteum is one of the organotherapeutic agents that can be supplied in limited quantities only. The amount of raw material from which it is made is comparatively small, but the physician wants a pure article. Armour and Company state that in their Laboratory the portion of the gland bearing the yellow bodies is carefully cut away and trimmed. This insures as pure a preparation as is possible until the active principle is found and isolated.

"Corpus Uuteum is indicated in functional disturbances of women, and is supplied by Armour in 2-grain tablets, 5-grain capsules and in powder."

County Society Proceedings

DAVIDSON COUNTY.

November 18th.—The regular weekly meeting of the Academy was called to order by the President, Dr. Olin West. The Secretary being absent, Dr. A. G. Nichol was requested to act in that capacity. Among those present were: Duncan Eve, Jr., Roberts, R. A. Barr, Savage, Hill, Dixon, Larkin Smith, Howard King, Bloomstein, Sharp, Overton, Ward, Eggstein, L. Caldwell, Sullivan, Owsley, Fuqua, Aycock, Kennon, Oughterson, Price, Leonard, Hibbett, Simmons Jack Witherspoon, Billington, and Morrissey. The minutes of the previous meeting were not read. The paper for the evening was on "Arterio-Sclerosis," by Dr. Deering J. Roberts. Dr. W. C. Dixon was to open the discussion, but was absent. The paper was then declared open for general discussion, and Dr. Larkin Smith stated that he had nothing to add to the exhaustive paper, but related a case of marked thickening of the superficial vessels of twenty years' standing.

Dr. Oughterson said that the paper was excellent and full, but that Dr. Roberts was inclined to limit this condition to older men. Dr. Oughterson said that arterio-sclerosis is present much earlier than is generally supposed. When it is present in the young—from twenty to thirty years—it is usually due to syphilis. The speaker said that arterio-sclerosis kills more men than any other disease, and that we are prone to overlook many cases.

Dr. Kennon remarked that Dr. Roberts did not mention the changes that occur in the eye-grounds which are absolutely diagnostic, viz., the decrease in the calibre of the vessels and the notching of the arteries as they cross the veins, etc.

Dr. Price stated that he was glad Dr. Kennon called attention to the eye-grounds. He did not agree with Dr. Oughterson in the statement that the cases of arterio-sclerosis in the young are due to syphilis.

The paper was further discussed by Drs. Larkin Smith, Oughterson, Neil, R. A. Barr, and closed by Dr. Roberts, the latter stating that the eye-grounds are, as a rule, late mani-

festations. He placed great stress upon high arterial tension and hypertrophy of the heart as diagnostic signs. He agreed with Dr. Oughterson that more deaths are due to arterio-sclerosis than any other cause even tuberculosis, and stated that the wonder is that we do not have more.

Case reports. Dr. R. A. Barr reported having operated on a double inguinal hernia some time ago, doing the so-called anatomical operation of Ferguson. Both recurred. Has since operated on one side, doing the Bassini operation. Also reported a case of strangulated umbilical hernia, which was about the size of a chestnut, in a man weighing 250 pounds.

Dr. Harris mentioned a case, apropos of hernia, seen through the courtesy of Dr. King, in a child of three years. There were four herniae; two inguinal, one umbilical and one in the epigastric region.

Dr. Duncan Eve, Jr., said that he had noted that in Chicago the operators repaired both sides in an inguinal hernia at one sitting.

Dr. Hill reported a case of pruritis hiemalis, the treatment of which was discussed by Drs. Price and Howard King.

The Academy then adjourned.

November 25th.—President West called the regular weekly meeting of the Academy to order at 8:10 p. m., with the following present: Litterer, Glasgow, Brush, Burch, Price, Savage, J. A. Witherspoon, Kennon, Caldwell, Barr, Altman, Wilson, Bloomstein, Crawford, Weaver, Oughterson, Simons, Floyd, Handly, Tarpley, Cullom, Witt, Hamilton, Harris, Fuqua, Williamson, Aycock, Black, Jones, Harrington, Neil, L. Caldwell, Hill, McCabe, Duncan Eve, Sr., W. A. Bryan, Shoulders, Nichol, Hibbett, Morrissey, Tigert, Padgett, Coles, Billington, DeWitt, H. King, McCampbell, Crockett, Eggstein, Dixon, Jack Witherspoon, Sullivan, R. O. Tucker, Teachout, Keller, Sharber, Cowden, and others.

Prof. William H. Howell of Johns Hopkins University, Baltimore, addressed the Academy on his recent researches on the coagulability of the blood and haemophilia. Prof. Howell's address was extemporaneous and dealt with the work he had done to determine the exact constituent of the blood which

determined its coagulability. There was no discussion on Prof. Howell's remarks.

Under "Case Reports," Dr. Howard King presented a man of 25 years who had a horny, elevated, oblong lesion about the size of a dollar on the outer side of the calf of the left leg. Merrerua was diagnosed.

Dr. McCabe reported a case of ununited fracture of the neck of the femur, which had been treated by Buck's extension. Operation was performed by Dr. McCabe, nailing the neck of the bone to the proper place after the fashion of Dr. Murphy. The patient now has perfect function. An X-ray photograph was exhibited showing the nails in situ.

Dr. Cowden discussed the technic of nailing ununited fractures of the neck of the femur as performed by Dr. Murphy of Chicago.

Dr. Kennon presented the following case: "K. R., white, age 9. First seen Sept. 16th, 1913. Previous medical history: usual diseases of childhood. No serious illness. Tonsillitis about four months ago. Present complaint: For about two months mother has noticed that the child blinked his eyes a good deal. On first visit to office, patient had a foreign body in right eye, which was removed. Was given a mild astringent eye lotion, thinking possibly the mild conjunctival catarrh which he had might be the cause of the blinking. About three weeks later he returned. The blinking was no better, possibly worse, and thinking it might possibly be Chorea, the heart was examined. A distinct arrhythmia was found, together with a blowing, systolic murmur at the apex. His tonsils were small, but there was a worm-eaten appearance on the right side. He was referred to his family physician, Dr. Wm. Bailey, who confirmed my diagnosis, and the patient was put to bed and the usual treatment given. He was kept in bed six weeks with some decrease in the arrhythmia, but about two weeks ago he developed a blowing, systolic murmur at the base. It was decided to remove the tonsils at once. This I did under ether anaesthesia five days ago. Since the operation, including the afternoon of the day of the operation, he has been seen daily both by Dr. Bailey and myself, and there has not been the slightest irregularity of the

heart. He was examined yesterday by Dr. Bailey, who found that the apical murmur had disappeared, and though the basal murmur persisted, it was much fainter. How to account for the condition, I do not know. The right tonsil was diseased and many crypts filled with caseous material were found in it. Three possibilities present themselves as explaining these phenomena: First, the loss of blood reducing the strain upon the heart, just as when we bleed a mitral regurgitation; second, the effect of the ether and to the atropine and morphine which he had before the operation; third, the profound nervous and mental effect of the entire procedure."

Dr. Witt asked if the patient had fever.

Dr. Kennon: "No, not at any time."

Dr. Witt: "If a new vegetation had appeared in the heart, as possibly evidenced by a new murmur at the base, there should have been fever. Possibly there was enough infection to cause weakening of the aortic ring without actual vegetations forming."

Dr. R. A. Barr called attention to Dr. Babcock's report some time since of 13 cases of myocarditis and endocarditis following chronic gall-bladder infection, most of which were relieved by operation.

Dr. Oughterson thinks that at least one-half of the cases of febrile conditions in children show a murmur at the base, so he does not think that the basal murmur in Dr. Kennon's case of any significance.

Dr. Kennon said, in answering Dr. Barr, that he examines these tonsils as routine in looking for focal infections to account for chorea.

Dr. Handly reported a case diagnosed by him as chorea which was due to an adherent prepuce. The patient was circumcised, but as yet has not been completely cured, though he thinks the patient will eventually recover.

Dr. Oughterson stated that he believed true chorea to be an infection, and not a functional disturbance, as in the case of Dr. Handly.

Dr. Witt discussed two cases of chorea treated with chloral hydrate, one of which died; the only case terminating fatally in his experience.

Dr. Tarpley reported a case of Acid Intoxi-

cation in a child. This case was discussed by Drs. Simons, Wilson, R. A. Barr, Witt and Hill. The Academy adjourned at 10 p. m.

December 2nd.—In the absence of the President and Vice President, the Academy was called to order by Dr. Robert Caldwell at 8:15 p. m. It was moved and seconded that the reading of the minutes be dispensed with, which carried after a division was called for. Those present were: Roberts, Toy, DeWitt, Aycock, Sharber, Goodwin, Litterer, Owsley, Sharp, Grizzard, Zbinden, Padgett, Sayers, Lassiter, Sanders, H. Barr, Bloomstein, Jones, Fuqua, Shoulders, Crawford, Dixon, Tarpley, L. Caldwell, McCabe, Kennon, Hatcher, H. King, Ward, Pollard, Dickens, Hibbett, Witt, Thach, Edwards, Oughterson, J. Witherspoon, Hill, Williamson, and visitors.

The Secretary read letters of transfer of membership of Dr. J. H. Preston of Gibson County and Dr. Chas. H. Gurney of Hamilton County. Dr. Bloomstein moved (seconded by Dr. DeWitt) that these names be acted upon for membership in the Academy. Carried. Dr. Roberts moved (seconded by Dr. L. Caldwell) that the Secretary be instructed to cast the vote of the Academy for Drs. Preston and Gurney for membership. This motion carried and the Secretary cast the vote as instructed.

The essay of the evening was by Dr. G. F. Aycock on "Para-Typhoid Fever."

Dr. W. C. Dixon, in opening the discussion, congratulated the essayist on the thoroughness of his paper. He stated that the agglutination test for this disease had become to be looked upon with skepticism. The speaker has seen three cases reacting to para-typhoid agglutination test, one of which had lobar pneumonia; another a typical case of malaria, though the plasmodium was not found; and the third, a short attack of fever lasting four days, which was not accounted for.

Dr. Dixon stated that the only sure way to make a diagnosis of this condition is by blood culture, and quoted Major Russell, of U. S. A., as saying the agglutination test is unreliable. As brought out by the essayist, the same method of treatment and prophylactic measure should be adopted as in the straight typhoid.

Dr. Litterer: He does not believe that the

agglutination test of much value in the differential diagnosis. In the case of malaria mentioned by Dr. Dixon, clumping took place in dilutions of 1 to 100. Dr. Litterer found that in tuberculosis, inguinal adenitis and other cases with negative blood cultures showed agglutination reactions with the para-typhoid bacillus. He believes that a negative report on the Para-A of more value than a positive report. If the test is positive, the most that can safely be said is that the case is suspicious. The Para-B and the bacillus enteritidis of Gaertner are the same, in the opinion of Dr. Litterer. In regard to the virulence, the Para-A can be quite virulent. Gideon Wells has reported five cases at autopsy. Litterer has done two. In the latter's cases the Peyer's patches were not much involved, neither were the lymph nodes. Blood culture is the best means of arriving at a diagnosis.

Dr. Witt stated that his experience was limited, though he has had a good many cases of para-typhoid infections this year. He has never seen a patient very ill, and thinks the mortality of 5 per cent as quoted rather high. Dr. Witt has not had the experience of Dr. Dixon and Dr. Litterer in regard to getting para-typhoid reactions in other diseases. The cases he has had, however, have been mild typhoid clinically. He referred to cases formerly living in Indianapolis previously reported to the Academy.

Dr. Bloomstein believes that this disease is on the increase. All the cases he has had with a positive report of Para-A ran a definite course. He has noted no symptoms in his cases different from typhoid. The shortest cases ran a course of three weeks, the longest eight weeks. All his cases, but three, were in children.

Dr. Jones stated that in Nashville, and especially in Davidson County, there has been an unusually large percentage of positive Widal tests to the para type. He thinks the nervous symptoms are more pronounced in para-typhoid than in the straight infection. He stressed the importance of getting the blood early in the course of the disease if blood culture is to be made. Two deaths were reported to the health department from Para-A type during the past year. He believes that the agglutination test is not as re-

liable in the para type as in the straight typhoid. He thinks that since the para type is mild, the history of such an attack may be overlooked and the residual agglutinations may remain, giving positive tests in other diseases. Mentioned the possibility of the examination being made of a "carrier."

Dr. Witt asked Dr. Jones if the physicians had reported back to him whether or not the cases he had reported as being positive proved to be so clinically.

Dr. Jones replied that a larger proportion had reported back that the cases ran a febrile course, though no statistics were kept.

Dr. Oughterson referred to five cases of his giving a positive test to the para-typhoid, but none proved to be so clinically. He thinks that any fever with a low leucocyte count is very suggestive of typhoid or para-typhoid.

Dr. Hill reported a case of aemobio ulceration giving a positive reaction to Para-A.

Dr. Lucian Caldwell thinks para-typhoid is on the increase. He has had 16 cases, all of which ran a course of mild typhoid. Several of his cases had chills in the beginning, stimulating malaria. One case had a marked hemorrhage.

Dr. DeWitt reported two cases of para-typhoid fever.

Dr. Aycock, in closing, stated that he believed the important points in the consideration of para-typhoid fever are: the recognition of this condition and the prevention of carriers.

The Academy adjourned at 9 p. m.

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December 9th.—The regular meeting of the Academy was called to order at 8:06 p. m., with the President, Dr. Olin West, in the chair. The members present were: Burch, Cowden, Sumpter, Preston, Goodwin, Hill, Jones, Jack Witherspoon, Manier, Williamson, Eggstein, McIlvain, Hatcher, Howard King, Hibbett, Bromberg, Sharber, McCabe, Tarpley, Kemmon, Briggs, Sanders, Tigert, Price, Shoulders, Crawford, R. Caldwell, O. Bryan, Simmons, Overton, Dixon, Oughterson, Pollard, Billington, Fuqua, Larkin Smith, Cullom, L. Caldwell and H. Barr.

Dr. Lucius P. Brown, of the State Bureau of Food and Drugs, addressed the Academy on the "Anti-Narcotics Law," enacted by the

Fifty-Eighth General Assembly, explaining its intent and scope. Dr. Brown also read the rules and regulations formulated by himself and Dr. Lillard, Secretary of the State Board of Health, regulating the enforcement of the act.

Dr. Price discussed the bill, especially section 8-A in regard to cocaine and its various derivatives. He moved, seconded by Dr. Bromberg, that a committee of the Academy be appointed to confer with Drs. Brown and Lillard in regard to the rules and regulations formulated to carry out the provisions of the act. Carried, and the chair appointed Drs. Price, Sharber and Jones.

Dr. L. E. Burch read a paper on the "Management of Raw Surfaces of the Peritoneum."

Dr. R. E. Fort was to open the discussion, but was absent on account of illness.

Dr. Sharber was called for and stated that in Lane's Clinic, in London, the latter used sterile liquid paraffin to prevent adhesions. His own experience has not been large enough to justify any statement from him.

Dr. Robert Caldwell said he arose to lend a word to this neglected phase of surgery. He believes that peritoneal and omental grafts preferable to oils in preventing adhesions, and referred to Dr. Binnie's paper on "The Use of Fat in Surgery," which was read before the Clinical Congress of Surgeons in November last.

Dr. Sanders related Coffee's conclusion in regard to adhesions in the abdomen, which are: First, that there is no difference as regards adhesions in the use of wet or dry sponges. Second, that certain patients are "adhesion formers," and no amount of care will prevent their formation to some extent. Third, That Coffee's method of dealing with raw surfaces in the pelvis will prevent the formation of adhesions.

Dr. Tigert referred to the so-called "adhesion formers" and his experience with such cases. He believes that oils are rendered valueless on account of their being a foreign body. Where raw surfaces are found the best method of covering them is with the material nature uses, i. e., peritoneum and omentum, as advocated by the essayist, and that the early steps of an operation should be so fashioned as to contemplate covering

the raw surfaces. Drainage should be omitted wherever possible.

Dr. McCabe discussed Coffee's paper in regard to the latter's "coffer-dam" method. Dr. McCabe has used peritoneum and omentum in covering raw surfaces.

HAMBLETON COUNTY.

The Hamblen County Medical Society met in regular session January 13th, 1914, with the President, Dr. S. M. Ryburn, in the chair.

Drs. T. B. Yancey and W. P. Robinson gave interesting talks on hookworm and intestinal parasites. These questions were freely discussed and many points of interest brought out. Dr. Robinson is doing a good work here, and while the per cent of infection is small, yet he is finding and reporting many other parasites to the family physician, who is working to eliminate the whole offending tribe. Dr. W. E. Howell read a very interesting paper on "Pterine Myomata." This paper was illustrated by drawings which aided materially in the presentation of the essay. It was well accepted and fully discussed. Dr. T. E. Boles reported a case of Puerperal Eclampsia, with death of the mother in the first convulsion; the convulsion coming after the mother had been in labor several hours. A twelve-pound baby girl was delivered after the mother's death and is still living.

There being no further business, the Society adjourned.

C. T. CARROLL, JR., M. D., Secretary.

HENDERSON COUNTY.

The Henderson County Medical Society met Tuesday, January 13, in Dr. Parker's office. Minutes of the previous meeting were read and approved. Dr. Watson read a very interesting paper on "School Hygiene," which was freely discussed by all present, and the President appointed Dr. Huntsman to write a paper to be read before the teachers of the county at their next meeting, on January 24. It was decided to postpone action on the list of non-payers until the next meeting in February and give the various parties on the list time to make proper settlement before the new list is printed, and every doctor in the county is especially urged by the Presi-

dent to make out a full list of every non-payer on his books and present them at the next meeting, that the doctors of the county will know the parties who do not pay the doctor for his labors.

The President ordered that every doctor in the county prepare a paper on "School Hygiene," as the duties will be assigned each member at the next meeting in February. The Society proposes to have lectures on "School Hygiene" made in every school house in the county during the month of February, also during the summer months. Drs. present were: Drs. Wyly, Boyd, Graves, Maxwell, Huntsman, Johnson, Watson, Parker. There being no further business the Society adjourned, to meet again in February.

JACKSON COUNTY.

The Jackson County Medical Society held its regular monthly meeting in the Courthouse, in Gainesboro, at 1:00 p. m., Monday January 19, 1914, with the usual number present, and with the President, Dr. W. R. Babry, in the chair. Minutes of the December meeting were read by the Secretary and approved. There were no clinics for this meeting, but there were quite a number of interesting case reports. Delinquent lists were revised, after which Dr. Condit read his excellent paper on "Measles." Dr. S. B. Fowler, whom Dr. Condit had appointed to lead the discussion of his paper, not being present, the discussion was opened by Dr. J. D. Quarles, after which it became general and all present took part. There being no further business, the Society adjourned, to meet again the third Monday in February, when Dr. F. O. Cornwell will read a paper on "Chronic Constipation," the discussion to be lead by Dr. H. P. Loftis.

ARTICLES FOR INCLUSION NEW AND NONOFFICIAL REMEDIES.

Since December 1 the following articles has been taken:

ARTICLES ACCEPTED FOR N. N. R.

The following articles have been accepted for inclusion with New and Nonofficial Remedies:

The Bayer Co., Inc.,

Elarson.
 Elarson Tablets.
 Hyson, Westcott & Co.,
 Sterile Amponles of Mercury Salicylate.
 Salvarson—"606"—Ehrlich, Suspension
 in Amponles.
 Neosalvarsan, Ehrlich, Suspension in Am-
 ponles.
 Mallinckrodt Chemical Works,
 Sodium Acid Phosphate.
 Parke, Davis & Co.,
 Emetine Hydrochloride Ampoules.
 Powers-Weightman-Rosengarten Co.,
 Sodium Acid Phosphate.
 Radium Chemical Co.,
 Radium Chloride.
 Radium Sulphate.
 Hynson, Westcott & Co.:
 Phenolsulphonaphthalein, H. W. & Co.
 Phenolsulphonaphthalein Ampoules. H.
 W. & Co.
 H. K. Mulford & Co.:
 Anti-Anthrax Serum, Mulford.
 Antistreptococcus Serum Scarlatina, Mul-
 ford.
 Disinfectant Krelos, Mulford.
 Salicylos.
 Staphylo-Scrobacterin.
 Strepto-Scrobacterin.
 Typho-Scrobacterin.

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies."

Digipoten—Digipoten consists of the digitalis glucosides in soluble form, diluted with milk sugar to give it a strength equal to that of digitalis of good quality. Digipoten is adjusted by the frog and guinea pig methods to have a strength of 1,400 tonic units and by chemical assay to contain from 0.3 to 0.4 per cent digitoxin. The action, uses and dosage of digipoten are the same as those of digitalis. It is sold in the form of a powder, which is soluble in water, and as Digipoten Tablets, each containing 0.03 Gm. The Ab-

bott Alkaloidal Co., Chicago, Ill. (Jour. A. M. A., December 6, 1913, p. 2069).

Tannigen Tablets—Each tablet contains tannigen (see N. N. R., 1913) 0.5 Gm. The Bayer Co., New York (Jour. December 6, 1913, p. 2069).

Bordet-Gengou Bacillus Vaccine for Whooping-Cough Prophylaxis—Greeley Laboratories, Inc., New York.

Bordet-Gengou Bacillus Vaccine for Whooping-Cough Therapy—This vaccine is believed to be of service in the prevention and also in the treatment of whooping-cough. Greeley Laboratories, Inc., New York City (Jour. A. M. A., December 13, 1913, p. 2158).

eC-ISMU--flvdv and for the mand fro hemm A liquid culture of the Bacillus Bulgarian Culture of Bacillus Bulgaricus, Fairchild—A liquid culture of the Bacillus Bulgaricus. The culture is sold in packages containing six and thirty vials, respectively. The culture is used internally in the treatment of intestinal putrefactive diseases and as an application to body cavities in the treatment of suppurative conditions. Fairchild Bros. & Foster, New York (Jour. A. M. A., December 13, 1913, p. 2158).

Slee's Antimeningitis Serum—For description of Antimeningococcus Serum see N. N. R., 1913, p. 215. The Abbott Alkaloidal Co., Chicago.

Slee's Antistreptococic Serum—For description of Antistreptococcus Serum see N. N. R., 1913, p. 216. The Abbott Alkaloidal Co., Chicago (Jour. A. M. A., December 20, 1913, p. 2242).

Since publication of New and Nonofficial Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies:"

Radium and Radium Salts.—Radium is used in medicine in the form of its chloride, bromide, sulphate and carbonate. The therapeutic value of radium salts depends on the emanations which are given off from the radium. Radium emanation consists of alpha-rays, beta-rays and gamma-rays, the latter be-

ing similar to X-rays and therapeutically the most useful. The quantity and concentration of radium emanations are expressed in terms of "curie" and Mache units. A "curie" is the amount of emanation in equilibrium with 1 Gm. of radium and a microcurie is one millionth of a "curie." A microcurie is equivalent to about 2,500 Mache units. It has been claimed that radium emanation is of value in all forms of non-suppurative, acute, subacute and chronic arthritis, in chronic muscle and joint rheumatism, in arthritis deformans, acute and chronic gout, neuralgia, sciatica, lumbago and in tabes dorsalis for the relief of lancinating pains. Its chief value is in the relief of pain. Surgically marked results are obtained in the removal of epitheliomata, birthmarks and scars. Radium may be administered in baths, by subcutaneous injection in the neighborhood of an involved joint (0.25 to 0.5 microcurie in 1 or 2 Cc. distilled water), by local applications as compresses (5-10 microcuries), by mouth as a drink cure (in increasing doses of from 1-10 to 10 microcuries three or more times a day), by inhalation, the patient for two hours daily remaining in the emanatorium, which contains 0.0025 to 0.25 (average 0.1) microcurie per liter of air.

Radium Chloride.—Radium chloride is supplied in the form of a mixture of radium chloride and barium chloride, and is sold on the basis of its radium content. Radium Chloride-Standard Chemical Co., Radium Chemical, Pittsburg, Pa.

Radium Sulphate.—Radium sulphate is supplied in the form of a mixture of radium sulphate and barium sulphate and is sold on the basis of its radium content. Radium Sulphate-Standard Chemical Co., Radium Chemical Co., Pittsburg, Pa. (Jour. A. M. A., January 3, 1914, p. 41).

Sodium Acid Phosphate.—Sodium acid phosphate (Sodii Phosphas Acidi), NaH_2PO_4 , H_2O , is the monosodium dihydrogen salt of orthophosphoric acid, containing not less than 82 per cent of anhydrous sodium acid phosphate. Sodium acid phosphate is administered to render the urine acid or to increase its acidity. It is used for this purpose to assist the action of hexamethylenamin which is effective only in acid urine. It should be given so that it has left the stomach before the

hexamethylenamin is given. Non-proprietary preparations: Sodium Acid Phosphate, M. C. W., The Mallinckrodt Chemical Works, St. Louis, Mo.; Sodium Phosphate, Monobasic, P. W. R.; The Powers-Weightman-Rosegarten Co., Philadelphia, Pa. (Jour. A. M. A., January 10, 1914, p. 127).

Slee's Refined and Concentrated Tetanus Antitoxin (Gloublin Solution).—For description of tetanus antitoxin, see N. N. R., 1913, p. 218. Abbott Alkalodial Co., Chicago.

Slee's Normal Horse Serum.—For description of normal horse serum, see N. N. R., 1913, p. 236. Abbott Alkalodial Co., Chicago (Jour. A. M. A., January 10, 1914, p. 128).

Ampoules Emetine Hydrochloride, P. D. & Co.—Each ampoule contains emetine hydrochloride 0.02 Gm. Parke, Davis & Co., Detroit, Mich. (Jour. A. M. A., January 10, 1914, p. 128).

Phenolsulphonephthalein.—A product differing chemically from phenolphthalein in that a carbonyl group of the latter has been replaced by a sulphone group. Phenolsulphonephthalein is used to determine the functional activity of the kidneys. It is injected intramuscularly or intravenously and its rate of excretion determined colorimetrically. Phenolsulphonephthalein is a red powder which yields a deep red solution with water or alcohol containing an alkali.

Phenolsulphonephthalein, H. W. & Co.—Made by special process and said to be exceptionally pure. Hyson, Westcott & Co., Baltimore, Md.

Phenolsulphonephthalein Ampoules.—Each contains a solution of 0.006 Gm. phenolsulphonephthalein, in the form of the monosodium salt. Hyson, Westcott & Co., Baltimore, Md.

Sterile Ampoules of Mercury Salicylate.—Each contains 0.06 Gm. of mercury salicylate N. N. R., suspended in a vegetable fat. Hyson, Westcott & Co., Baltimore, Md.

Salvarsan-Ehrlich, Suspension in Ampoules.—Each contains 0.1 Gm. of salvarsan, suspended in a vegetable fat. Hyson, Westcott & Co., Baltimore, Md.

Neosalvarsan-Ehrlich, Suspension in Ampoules.—Each contains 0.15 Gm. neosalvarsan, suspended in a vegetable fat. Hyson, West-

cett & Co., Baltimore, Md. (Jour. A. M. A., January 24, 1914, p. 297 and 298).

Elarson.—Elarson is the strontium salt of chlorarseno-behenolic acid, containing about 13 per cent of arsenic and about 6 per cent of chlorine. It has the action of arsenic, but the arsenic being in liquid-like combination is said to be better utilized and to exert its therapeutic effects in smaller doses than other organic arsenical preparations. Also, it is said to produce relatively little gastric irritation. It is sold only in the form of Elarson tablets. The Baytr Co., New York (Jour. A. M. A., January 31, 1914, p. 379).

PROPAGANDA FOR REFORM.

Lactic Acid Ferment Preparations in N. N. R.—Assertions that the lactic acid ferment preparations on the market are worthless caused the Council on Pharmacy and Chemistry to examine those admitted to N. N. R. While past examinations showed this class of preparations to be most unreliable, the present market supply was found to be satisfactory. The products examined were Fairchild Culture of *Bacillus Bulgaricus*, lactic bacillary tablets, Fairchild, lactapoules, Fairchild, bacillary milk, Fairchild, bulgara tablets, H. W. Co., massolin, Schleffelin (Jour. A. M. A., December 6, 1913, p. 2084).

Sanatogen—The fundamental objection to Sanatogen is not its outrageously high price, but the attempt to ascribe to a mixture of casein and glycerophosphate powers not possessed by these ingredients. The claim that Sanatogen is a "nerve food" is an absurdity as is any claim that the casein in Sanatogen has a greater good value than the casein in ordinary milk. Physicians who have given fulsome puffs for Sanatogen are invited to study the claims which are made for it—the following being one ". . . it revivifies the nerves, promoting sleep and helping digestion" (Jour. A. M. A., December 6, 1913, p. 2085).

The Value of Echinacea—While most extravagant claims are made for the drug, the Council on Pharmacy and Chemistry concludes that, on the basis of the available evidence, echinacea is not entitled to be described in New and Nonofficial Remedies as a

drug of probable value (Jour. A. M. A., December 6, 1913, p. 2088).

Texas Guinan—The Texas Guinan World-Famed Treatment for Corpulency (Texas Guinan Co., Los Angeles, Cal). appears to be the latest venture of W. C. Cunningham, of Marjorie Hamilton's Obesity Cure fame. It is exploited by follow-up letters giving the experiences of Texas Guinan, an actress, and offering the preparation at a sliding scale of prices, ranging from twenty down to three dollars. From an analysis made in the A. M. A. Chemical Laboratory it appears that an essentially similar preparation may be obtained by mixing one pound of powdered alum with ten ounces of alcohol and enough water to make one quart. A second specimen which was examined in the Association's laboratory contained no alum or alcohol and appeared to be a tragacanth preparation of the "vanishing lotion" type (Jour. A. M. A., December 13, 1913, p. 2173).

Colloidal Palladium—A preparation of colloidal palladium, under the proprietary name Leptynol, is proposed as a means of causing the absorption of adipose tissue. The preparation appears one of the many thousand proprietaries produced abroad in the past year and put on the market after meager experimental work (Jour. A. M. A., December 13, 1913, p. 2179).

Dowd's Phosphatometer—According to its inventor this is a device "for taking the phosphatic index or pulse of the nervous system." Its originator, Dr. J. Henry Dowd, M.D., Buffalo, N. Y., writes enthusiastically of his instrument and of "Comp. Phosphorus Tonic." The phosphatometer is a scientific absurdity which pretends to determine the amount of phosphate in the urine and thus to measure "nerve metabolism." (Jour. A. M. A., December 20, 1913, p. 2258).

Another "Cancer Cure.—Denver newspapers advertise that the International Skin and Cancer Institute of Denver claims to have a cure for cancer. The "cure" is exploited by one John D. Alkire. No doubt those afflicted with cancer, and those who believe themselves afflicted with cancer, will flock to Denver for the "cure." The actual victims of the disease will of course die, but there will be the

usual number of recoveries from non-malignant sores that will be heralded as "cures" and thus will make the venture a profitable one. To the honor of Denver it may be said that some of its newspapers refused the advertisement (*Jour. A. M. A.*, December 20, 1913, p. 2248).

The Ready Reckoner.—The attempt of a proprietary exploiter to pose as the physician's postgraduate instructor comes from the promoter of a "blood stimulating" preparation—Hemaboloids Arseniated (with Strychnia). It is in the form of a ready reckoner for the diagnosis of pathologic sputum. The thing consists of a revolving arrow, surrounded by circles containing illustrations of bacteria such as no human eye ever saw, through a microscope. The physician apparently is expected to point the arrow to what he sees, or thinks he sees, in the microscope and when, through a window in the tail of the arrow, observe the name of the organism and the disease which it produces. The device is an insult to intelligent physicians and belongs in the waste-basket (*Jour. A. M. A.*, December 27, 1913, p. 2306).

Pa-Pay-Ans (Bell).—An analysis, included with the report of the Council on Pharmacy and Chemistry rejecting the product, failed to find one of the constituents claimed to be present in the preparation—the constituent after which the medicine appears to have been named, namely, papain (*Jour. A. M. A.*, December 27, 1913, p. 2314).

The Action of Hexamethylenamin.—It has been shown by Hanzlik and Collins that hexamethylenamin can act only in body fluids which are acid in reaction, namely, the gastric juice and the urine. The only part of the body in which hexamethylenamin may be expected to exert an antiseptic action is in the urinary tract, and then only if the urine is acid. If the urine is not acid already sodium acid phosphate should be administered to render it so. The administration of sodium or potassium acetate or citrate, in sufficient quantity, will render an acid urine alkaline and inhibit the action of hexamethylenamin (*Jour. A. M. A.*, January 3, 1914, p. 43).

Odor-o-no.—Odor-o-no, The Odorono Co., Cincinnati, O., is sold as the "anti-dress-shield toilet water." It is claimed to eliminate excessive perspiration and to be absolutely harmless. Confirming the analysis made by the Indiana state chemists some time ago, the A. M. A. Chemical Laboratory reports that now, as when examined before, odor-o-no is a strong solution of aluminum chloride. When this solution is applied to the skin, it will be decomposed by the perspiration into free hydrochloric acid which will attack and irritate the skin, and aluminum hydroxide which tends to clog up the pores (*Jour. A. M. A.*, January 3, 1914, p. 54).

Hydrocyanate of Iron, Tilden.—While from the name one would judge hydrocyanate of iron, Tilden, to be a cyanide of iron, analysis in the A. M. A. Chemical Laboratory has demonstrated the preparation to consist essentially of equal parts of tale and Prussian blue, with traces of organic matter having the properties of alkaloids. Prussian blue is a remedy that has been used for epilepsy and found wanting (*Jour. A. M. A.*, January 3, 1914, p. 58).

The Quality of Sodium Acid Phosphate.—As it appears probable that the use of sodium acid phosphate will increase and since previous experience has emphasized the unreliability of little used drugs, the A. M. A. Chemical Laboratory deemed it important to examine the market supply. While the official sodium phosphate may be obtained of exceptional purity, the examination showed that the market supply of sodium acid phosphate was decidedly variable and much less pure, although not seriously impure. Based on the examination the laboratory proposed standards which were thought fair, both to those who make it and those who use it in their practice. The examination showed the product of the Mallinckrodt Chemical Works and of the Powers-Weightman-Rosengarten Co., to comply with the proposed standards. Acting on the report of the laboratory, the Council on Pharmacy and Chemistry decided to describe sodium acid phosphate in New and Nonofficial Remedies, and having adopted the proposed standards of purity, accepted the two brands named for inclusion with N. R. R. (*Jour. A. M. A.*, January 10, 1914, p. 142).

Hypo-Quinidol.—While no definite statements appear to be contained in the advertising matter sent out by R. W. Gardner, certain statements suggest that hypo-quinidol might be some sort of quinin hypophosphate preparation. But if this is true, its action would be the same as other salts of quinin and the extravagant claims made could not be substantiated. Hypo-Quinidol is a preparation, the composition of which is secret and for which highly improbable claims are made (*Jour., A. M. A.*, January 10, 1914., p. 148).

The Richie Morphine Cure.—The Richie Co. was discussed in Collier's Great American Fraud series as one of the concerns which under the guise of mail-order "cures" for the morphin habit fosters the slavery of the drug habit by substituting for the morphin addiction an addiction to their villainous mixtures or opiates. More recently shipments of the "Richie cure" were seized by the Federal authorities and found on analysis to contain from 7.21 grains to 15.95 grains of morphin sulphate to the fluidounce (*Jour. A. M. A.*, January 10, 1914, p. 144).

Radium in Carcinoma.—Sparmann reports on the after-history of fifty-three cases of carcinoma treated with radium. Of these eleven have died since the treatment, in six the tumor has disappeared, in five the condition seems improved, in seven the condition is aggravated and in the others the treatment was not continued because the condition of the patients had become worse. While these results show that radium is a remedy of use in the treatment of cancer it is not a sovereign remedy as some enthusiastic reports would

have us believe (*Jour. A. M. A.*, January 17, 1914, p. 212).

Expurgo Anti-Diabetes.—The claim made for Expurgo Anti-Diabetes (sold in Canada as Sanol Anti-Diabetes) that it is "The only positive cure for diabetes" and others of this character should be sufficient to condemn it. Nevertheless medical journals advertise it and physicians have been found to give testimonials for it. Examination in the A. M. A. Chemical Laboratory showed that Expurgo Anti-Diabetes is essentially a watery solution of plant extractives with small quantities of sodium salicylate and salt. The exploiters claim that their stuff contains the fruit and bark of jambul, rosemary, star anise and fluid extract of calamus, cinchona, cola, condurango and gentian. One of the claimed ingredients, jambul, was in vogue as a remedy for diabetes some years ago. It was tried and found wanting and relegated to the therapeutic scrap heap (*Jour. A. M. A.*, January 24, 1914, p. 312).

Case's Rheumatic Specific.—This is a "patent medicine" sold under the inferential claim that it does not contain salicylate. A package bearing the statement that this medicine "Cures where all else fails rheumatism; muscular, sciatica, lumbago, gout, neuralgia, neuritis" contained one box of "Rheumatic and Gout Pills" and one of "Bilious and Liver Tablets." Examination in the A. M. A. Chemical Laboratory showed the first to contain sodium salicylate with some magnesium oxide and licorice root, while the second was found to contain aloin or some preparation of aloes as the purgative constituent (*Jour. A. M. A.*, January 31, 1914, p. 394).

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THE MICROSCOPICAL DIAGNOSIS OF INTESTINAL PARASITES.*

By Herman Spitz, M.D., Nashville,
Instructor in Histology, Vanderbilt Medical
College.

In selecting the subject of this paper the writer was influenced largely by two factors: first, the extremely wide distribution of intestinal parasitism; second, the ever-increasing necessity for knowledge of the microscopical content and structure of the feces, this being due in great measure to our rapidly growing intercourse with the tropics. That this subject is daily receiving more and more attention is well indicated, and as readily shown by the increasing number of reports from physicians and others, received at the various State Boards of Health. Probably the greatest factor in bringing the subject of the microscopical examination of the feces to the attention of the physicians throughout the South is the work being done by the Rockefeller Sanitary Commission, through the nearly 100 men in our Southern States in their fight against Uncinariasis. While developing the best means for the detection of hookworm ova in the feces, the need for detecting the ova of other parasites which may infest the intestinal canal, either in single or multiple infection, became apparent.

Of the great number of parasites existing throughout the animal kingdom, those infesting man are comparatively few. These are

divided into two great classes: first, the ecto-parasites, living upon the surface; second, endo-parasites, inhabiting some part of the internal structure of its host. This paper shall consider ecto-parasites only, e.g., those living upon the surface. Of this type we find examples in various parts of the body, and we propose to confine ourselves to those ecto-parasites inhabiting the intestinal canal.

The presence of the parasites in the intestinal canal may be apparent to the laymen, as in the case of tapeworm infection, when the segments are passed in the stool. On the other hand, their presence may be suspected by a greater or less number of indefinite symptoms, and their presence absolutely determined by the finding of the ova in the stool. This latter is, in many cases, a comparatively simple matter, and in other cases it becomes a matter of arduous search.

The technique involved is of itself not difficult. The recognition of the characteristic ova is also a matter of no great moment. But an exclusion of the various vegetable cells, fibers, and other particles of detritus found in the feces, as not being parasitic in nature is another matter, and requires a knowledge of the structure of our common vegetable foods.

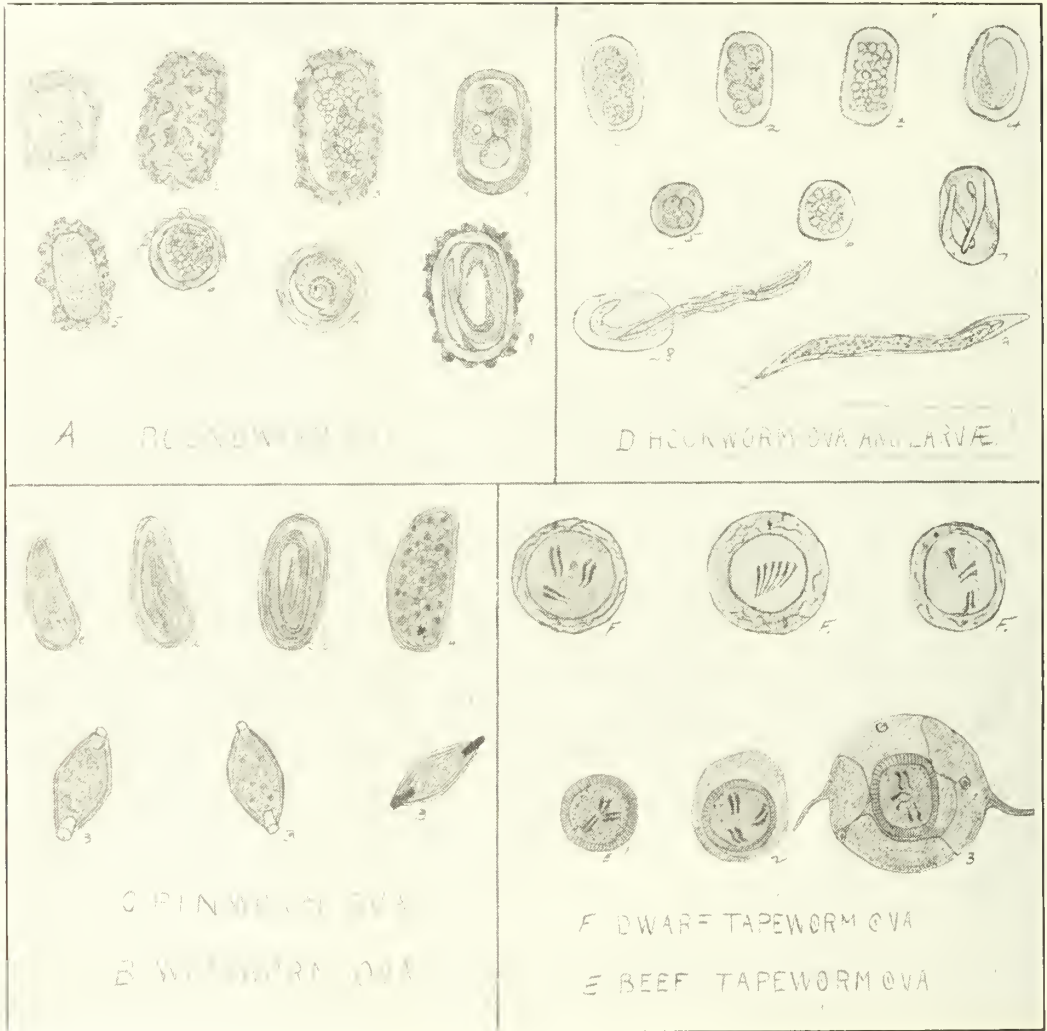
The laboratory equipment necessary for this work need not be extensive. An ordinary microscope, such as is used by physicians in their routine laboratory work, a hand centrifuge, centrifuge tubes, slides, cover glasses, glass pipettes, glass rods, and a box of toothpicks with a broad end completes the list. A mechanical stage, while not absolutely necessary, is of great help, as it enables the examiner to carefully go over the entire preparation. In examining the slide with the two-thirds objective, the light should be cut off by aid of the lower diaphragm, as too much light floods the specimen and the various cells

*Read before the Nashville Academy of Medicine, January, 1914.

are not distinctly seen. It is rarely necessary to use the one-sixth objective, but when it is found necessary to use the higher power for the purpose of more minute study, the diaphragm should be opened.

Before detailing the methods of examination, it might be well to mention a few points in regard to the specimen itself—how it

frequently received. It is hardly necessary to enumerate the many objections to such a procedure, especially on the part of physicians. Patients can be excused, as they are not supposed to know better. The patient should be furnished with a small, no neck, clean bottle. A two to four-drachm homeopathic vial is ideal for the purpose. In lieu of this, a vase



should be obtained. It is not necessary to give a purgative, the ova being found in all specimens, as a rule. In suspected tapeworm infection, if the ova are not found, a small dose of a vermifuge may be given, thus expelling some of the segments. The patient should be explicitly told that only a small amount of the fecal mass is needed for the examination. At the State Board of Health, pint and quart Mason fruit jars have been

like bottle, a tin or porcelain ointment box may be used. The objection to a bottle with a neck is this: Within the short space of twenty-four hours gases accumulate in the bottle, especially under the neck; these gases being held in by pressure are released when the package is unwrapped, the cork and contents of the bottle are blown out, soiling everything with which it comes in contact, and the specimen is lost. It is well as a routine

measure to put 2 to 4 c.c. of a 2 to 5 per cent solution of formalin, or 2 per cent Lysol solution, a little ether or chloroform, or several crystals of thymol in each vial to prevent fermentation and the evolution of malodorous gases due to bacterial activity.

The simplest and earliest method of examining the feces is the smear method. Several drops of water are placed in the center of a clean slide. On the broad end of a toothpick a particle of feces, about the size of a No. 6 shot, is picked up, and a thin emulsion is made on the slide. If the feces be fluid it can be examined as it is. At least ten such smears should be examined before a negative report is returned. To examine ten such preparations will require twenty-five minutes to an hour, according to the experience of the examiner. This, as is readily seen, requires entirely too much time. In order to facilitate the examination many methods have been devised, the object of any or all of them being to concentrate the ova in sufficient numbers, so as to find them in the shortest possible time. A brief mention of the more important methods may not be amiss.

Pepper's Method. Pepper discovered that hookworm ova have the property of sticking to the slides; he made very thick smears, and after allowing the heavier particles to settle for a moment, he immersed the slide in water and gently flushed the smear, washing most of it off. An examination of the slide under the two-thirds power shows the ova, this examination being facilitated by the washing off of most of the feces. This method is not accurate in all cases of hookworm infection, and is, of course, of very little value in other vermes infections.

Sedimentation Method. The feces are stirred with two to three times its volume of water in a conical glass vessel and allowed to settle. The supernatant fluid is then poured off, water added to the precipitate, thoroughly stirred and again allowed to settle; this is repeated as long as any material floats. The sediment is then examined (used by Stiles, Braun, Luhe and others).

Burette Method. This is similar to the above, the sediment being withdrawn through a stop cock at the bottom of the tube.

Centrifuge or Wash Method. In this the

feces are mixed with water, all particles of the fecal mass being broken up thoroughly. This is centrifugalized for one minute, the supernatant fluid poured off, water added to the precipitate, and the process is repeated several times until the sediment is thoroughly washed.

Sieve Method. The feces being thoroughly mixed with water are strained and the filtrate examined. (Used by Cobb, in Agricultural Department, Bass, Telleman, Garrison, and others).

Filter Method. Feces are washed until no more soluble matter remains, residue being examined.

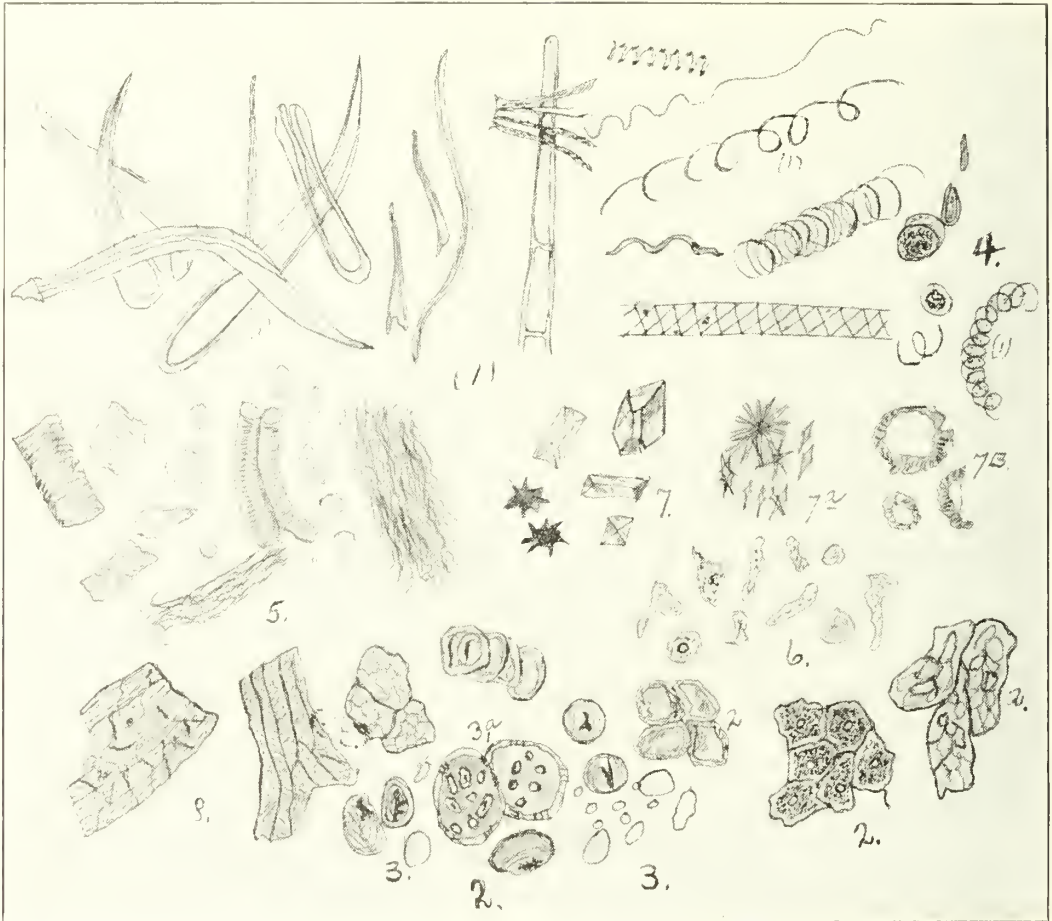
Bass' Salt Solution Method. Thoroughly mix feces with nine-tenths saturated NaCl and allow to settle. The ova being of a lighter specific gravity than the fluid, floats to the top. A drop or two from the top is examined. Bass later modified this method as follows: The feces are mixed with water, thoroughly broken up and strained through gauze. Centrifugalize filtrate and add filtrate until all the feces have been washed. Wash sediment several times. Then to the sediment add a solution of calcium chloride, sp. gr. 1.050, thoroughly mix, centrifugalize and examine sediment, the supernatant fluid containing the bulk of the vegetable debris lighter than the specific gravity 1.050 being poured off. Or to this sediment may be added calcium chloride solution sp. gr. 1.250, centrifugalize, and examine a drop or two from the surface.

Hall, of the Bureau of Animal Industry, has devised the most elaborate of all the methods that have come under the writer's notice. All the fecal mass is comminuted in about twice its volume of water by being thoroughly shaken with the aid of lead shots, or thoroughly broken up with the aid of a rod. This material is then run through a series of six sieves, the size of the mesh in each decreasing in diameter (the object of these various-sized sieves being to screen out all the coarse particles of vegetable matter and the whole parasites). The material passing through the sieves is caught in a large evaporating dish, more water being added through the sieves to thoroughly carry through all the ova. The contents of this dish is then strained through

a sieve made of Miller's silk bolting cloth, the mesh of which is large enough to permit the ova to pass through. This material is caught in a tall glass cylinder, more water or saline being added, allowed to settle, and the sediment is centrifugalized, one tube with water and one tube with calcium chloride sp. gr. 1.250, as per Bass' Method. This method

material. The resulting mixtures are then filtered through gauze, the filtrate mixed with water, centrifugalized, and the sediment examined.

One objection common to all of these methods is the length of time necessary to complete the preparation of the feces before it is ready for examination. The number of pieces



1. Vegetable fibers and hairs.
2. Vegetable cells.
3. Starch granules 3a in cells.
4. Vegetable debris in broken spirals.
5. Meat fibers and elastic tissue fibers in various stages of digestion.

6. Epithelial cells from intestinal canal in various stages of degeneration.

7. Crystals, 7a fatty crystals in mucous, 7b soap crystals.

8. Portions of vegetable cell wall.

is very accurate. It takes a great deal of time, however, and has entirely too many pieces of apparatus for a practitioner to worry with.

Chemical Methods. In these methods various chemicals are added to the feces, e.g., ether to dissolve the fats, HCl to dissolve albumens, mucin, soaps, casein, phosphates, etc., antiformin to digest much of the vegetable

of apparatus used by Hall is also a serious objection, as much time is consumed in cleaning the sieves and glassware. The various chemical reagents and other solutions require time in their preparation, and in the opinion of the writer, are an unnecessary expense.

The technique used by the writer is not original; it being simply one of the steps used by nearly all of the workers in this field, i.e.,

that of centrifugalizing and washing, similar to the method used by Pepper, differing only in the use of a smaller amount of feces. A portion of feces, about the size of a chestnut is picked up on the end of a glass pipette, put into a centrifuge tube, about two-thirds full of water, and thoroughly mixed by rubbing on the sides in the tube with the pipette. This is centrifugalized for about half a minute, the supernatant fluid poured off and the sediment is re-washed two or three times. By this means, the bulk of the vegetable debris has been washed out, and only the heavier solid particles remain. A drop or two of this sediment spread out thinly on a clean slide presents a very attractive picture for study. All the lighter material of the excreta, such as bacteria, yeasts, maccous shreds, cell walls, desquamated cells and other debris, having been washed out, the remaining particles stand out clearly, and one can look over such a smear rapidly without the fear of overlooking any ova. This method has been tested and compared by the writer against Hall's method while working in the Department of Agriculture, Bureau of Animal Industry, at Washington. It is as accurate and the ova are found in much less time. It has been compared against many of the other methods with as good or better results, and with a greater saving of time.

Vegetable fibres and hairs, (1) resembling larvae, (2) vegetable cells resembling the ova, starch granules, (3) resembling hookworm and pinworm ova, and cell capsules filled with fecal debris, are the most confusing substances found in the feces.

Vegetable fibres and hairs are of unequal size, varying in length and thickness; some are straight, while others are curved and spiral. Some have a hollow shaft running entirely through the fiber, while others have none, they are frequently found in great numbers and present no motility.

The larvae of the intestinal parasites are of uniform size. An alimentary canal can be made out, which ends by an anal orifice anterior to the posterior third. They are not seen, as a rule, in great numbers; present motility, and ova are found. An exception to this last statement is seen in *Stroungyloides Intestinalis* infection, where the larvae are

found in great numbers, but the ova are seldom seen.

Vegetable cells are of irregular shape, size and color. Their interior is divided by numerous partitions, and this in itself serves to differentiate them from ova, the latter being uniform in size, shape and color, according to the type found.

Starch granules are clear, highly refractile bodies, irregular size and shape. Some of these resemble hookworm and pinworm ova so closely as to require a close study to differentiate them. Starch granules are homogeneous in structure, are frequently found enclosed in cellular sacks. Upon the addition of a drop of tincture of iodine to the smear, the starch will turn blue, giving the typical re-action. Ova present a segmenting protoplasm and do not give the starch re-action.

Vegetable capsules containing fecal debris offer some difficulty at times. These may resemble any of the ova, either in color or outline. Some Vegetable fibres that are spiral in structure become broken, the broken parts being filled with debris resemble hookworm ova very closely. These various artifacts are easily differentiated, however, by stirring the smear with one of the toothpicks, when the various cells, upon rolling over will be seen to be irregular in outline, broken or half-filled; while the broken parts of the spiral fibers stand up, and you see them on edge, just as you look at the end of a coin. Ova roll over and over and are symmetrical in outline.

A number of distinct orders of parasites infest the intestinal canal, but only two orders, the nematodes, or round worms, and the cestodes, or tapeworms, will be discussed in this paper, these being the small infections with which we have to deal.

The Nematodes are the most frequent inhabitants of man's intestinal canal, and the following types are the ones usually found in the United States. 1. *Ascaris Lumbricoides*, known by the laity as the Round or Eel worm, is the most common parasite in man. Generically similar but specifically distinct parasites are found in many of the domestic animals; horse, cattle, swine, etc. The *Ascarides*, infecting dogs, is a much smaller para-

site and is an accidental infection in man. The female carries the ova in extremely large numbers, these being readily found and recognized in the feces. They differ from all other ova in that they present a double wall, over which we find a rough, mamillated albuminous covering, (A1-2-3-5-8) which is usually tinged from a light to a dark brown by the fecal pigments. They may be black—as when the patient has taken bismuth, the sulphide of bismuth is formed in the intestinal canal—this coloring the ova black. The ova are frequently found without the outer albuminous covering, (A4-7) in which case they present a smooth, thick, double walled shell, not necessarily colored, and showing a granular protoplasm, (A7) and at times, the fully developed embryo (A8).

2. *Tricocephalus Dispar*, commonly known as the Whipworm, from its resemblance to a whip, is also cosmopolitan in its distribution. These are also found in various apes and lemurs, and specifically distinct types in dogs, cattle, sheep and other animals. The ova are somewhat lemon shaped, and have a peculiar, highly refractile button on each end, which has been likened unto a Turkish Fez (B). They have a thick, double wall, and are filled with a fine or coarsely granular protoplasm, and never contain any embryo. These ova are also stained from a light to a dark brown by the fecal pigments. They are approximately 50 microns long, and 20 microns in width.

3. *Oxyuris Vermicularis*, commonly known as the Pin, Thread or Seat Worm, is widely distributed in nature. Man is the only animal harboring this particular parasite. Similar parasites are found in some of the lower animals. The ova are characteristically asymmetrical, one side being oval and the other flattened, while one pole is more pointed than the other (C). These ova present a double (C), and in some instances a triple wall (C3), very thin and delicately stained. While the granular protoplasm may be found (C4), it is the rule to find the fully developed embryo in the ova (C3). They are approximately 50 microns long, and 16 to 24 microns wide.

If in a suspected case of pinworm infection, the ova are not found in the feces, several means of diagnosis are at hand. The rectal finger, a dull knife, or a slide may be

scraped around the anal orifice of the patient, the scrapings thus obtained being examined for the ova. The finger may be inserted into the rectum and the adult worms be withdrawn on the finger. The child's crotch may be examined while asleep, and the bed clothes searched, as the adult worms have a tendency to crawl out of the anus while the host is asleep.

4. *Uncinaria*, commonly known as the hook worm. So much work has been done with these parasites within the past few years throughout the South, that it is hardly necessary for me to occupy your time with a discussion concerning this well-known Nematode. It encircles the globe in the tropical and sub-tropical climates, infesting untold thousands, and beyond these limits is found in lesser degree. Many of the lower animals are hosts to a parasite similar in nature. Two distinct types are reported for man, *Uncinaria Duodenalis*, the Old World Hookworm, and *Uncinaria of Necator Americana* (Stiles), the New World Hookworm. The ova of both are similar in outline, and vary only in their size: the ova of the *Necator Americana* measuring 64 to 72 microns in length, and 36 to 40 microns in width, the ova of the Old World type are smaller, measuring 52 to 61 microns in length, and 32 to 38 microns in width. These ova present a thin shell, oval in outline, containing the segmenting protoplasm, which rarely completely fills the shell, leaving a clear zone between the shell and protoplasm (5). The various stages of embryonic development are easily noted, from the beginning of cell cleavage to the escape of the larvae from their shells (D4-7-8-9.) Larvae are frequently found propelling themselves through the smear with a rapid, side to side movement. Many ova are also found, as a rule, this differing from *Strongyloides* infection, in which we find the Rhabditiform larvae in large numbers, but the ova are seldom found, and then in very few numbers.

Tapeworm infection in man has been known for centuries, but the time has passed when the simple diagnosis of tapeworm infection suffices, either for the patient or the physician. The kind of Taeniasis present controls not only the manner of treatment, but the time in which treatment may be instituted.

In exceptional cases the risks to be taken and the chances for recovery are determined by knowing the particular type of tapeworm with which we have to deal.

Fortunately for us, man is usually the host of the sexual stage of tapeworm infection, and rarely the host of the larval stage, the latter being a somatic infection. In the present light of our knowledge, man is the sole host for the sexual stage of at least two large cestodes, *Taenia Saginata* and *Taenia Solium*, the former being met with rather frequently in this section, the latter being rarely seen in the United States. Men and dogs are the hosts of the sexual stage of the third large tapeworm, *Tibothrecephalus Latus*. In common with rats and mice, man seems to have become the normal host for both the sexual and larval stages of *Hymenolepis Nana*, (the dwarf tapeworm) though in recent years Stiles and others, express themselves as believing to be specifically an probably varietally distinct. The *Dipylidium Caninum* of dogs and cats, *Hymenolepis Lanceolata* of domestic fowls and *Hymenolepis Diminuta* of rats are rarely, and then only as accidental infections, found in man.

The *Taenia Saginata* or *Mediocancellata*, popularly known as the beef fat or unarmed tapeworm, attains a length in some cases of 30 to 35 feet. Over a thousand segments may be present. In examining the expelled worm the head should always be looked for, for the case is not cured unless the head is expelled. Rarely more than one tapeworm is found in any one case.

Taenia Solium, the armed or Measly Pork tapeworm, does not attain the length of the beef tapeworm. Although the beef tapeworm is more difficult to expell and more liable to cause anemia, it does not combine with it the danger of *Cysticercus*, which may be found with infection by the armed tapeworm.

The ova of these two parasites are, for all practical purposes, similar. They are more or less spherical, enclosed in a thick radially striated shell, (E) (Embryophore) which is in some cases found surrounded by the Vitellus (E2-3), and contains the embryo with its six hooklets. These ova are stained brown by the contents of the intestinal canal.

A differentiation between these two para-

sites is made by finding a double row of hooklets on the Rostellum of the pork tapeworm and the absence of these hooklets on the head of the beef tapeworm. If the head is not found, the diagnosis is made by pressing one of the terminal segments between two glass slides, holding it up to the light and counting the lateral branches of the uterus. The *Taenia Saginata* containing 15 to 35 slender, dichotomous lateral branches, on each side of, and shorter than the median stem. The proglottides (segments) of the *Taenia Solium* contain 7 to 15 lateral branches, these being, as a rule, broader and longer than those of the beef tapeworm.

Hymenolepis nana, or the dwarf tapeworm, has until the past few years been considered a curiosity in this country; but now is considered, especially in the South, the most common tapeworm of man. It is the smallest tapeworm of man, rarely exceeding one and a half inches in length, and contains 150 to 200 segments. The Rostellum is armed with hooklets. The ova are larger than those of the Beef and Pork tapeworms, and are stained by the fecal pigments. These ova present a double shell, the outer of which is from 40 to 60 microns in diameter, the inner from 16 to 34 in diameter. Within the inner membrane of the six hooklets of the embryo are seen imbedded in the granular protoplasm. Between the two shells at each pole of the ovum small protuberances are seen, from which several highly refractile filaments spring. (F.)

The other Cestodes parasitic to man being exceedingly rare, and as none of these have been reported for this section of the country, it is useless to enter into a discussion of their appearance.

Multiplicity of infection is by no means a rare occurrence. Two or more types of the Nematodes may be harbored at the same time. I have seen several cases in which four types were found, i.e., the Whip-Round-Pin and Hookworm. In one case, in addition to these four, the spores of *Amoeba Coli* were found. Cestode infection is rarely complicated with Nematode infection. The number of any parasite in the host at one time varies within wide limits, from one which is the rule in Beef and Pork Tapeworm infection to several thou-

sand in hookworm, pinworm and dwarf tapeworm infection to several thousand in hookworm infection.

The number of and variety of symptoms which may result from infections, so elastic in number and varied in nature, are legion and that you are not at a loss for a diagnosis more frequently, speaks well for the clinical ability of our practitioners.

PROSTATIC HYPERTROPHY.

Walter D. Bieberbach, M.D.,
Cystoscopist Out-Patient Staff, Worcester
City Hospital.

In all cases that are reported as prostatic hypertrophy probably only in about two thirds of these cases does this condition exist.

The enlargement generally begins at the age of fifty years or after, but this question is somewhat disputed by different writers, some claiming that 80 per cent of the cases present themselves at about this age, while others believe only 20 per cent is seen.

However, I believe it is almost impossible to get the right percentages, as most patients present themselves for other treatment, whereby prostatic hypertrophy is discovered by accident in a certain number of cases.

There are a large number of cases that never know that enlargement of the prostate exists until they are taken with a cold, or have their bodies exposed to dampness, or chilled from exposure. Then they are unable to pass urine, and a physician is called and discovers that the patient has an enlarged gland.

Hugh Young believes that fifty per cent who have reached the age of fifty years or over have hypertrophy of the prostate. Of this number about ten to fifteen per cent of the cases require treatment for the trouble that presents itself.

There is a certain percentage of cases that are thought to be simple hypertrophy, but a malignant condition exists. The symptoms that are produced are very benign in character and cause very little trouble. Some of the patients may live for a number of years and finally die from some other trouble. Hugh

Cabot has reported a case that has lived for thirteen years.

The cause of prostatic hypertrophy has stimulated much discussion, and at the best the etiology is based largely upon hypotheses. It may be said that old age or sin has lived beyond the age of fifty years.

The French school teaches that arteriosclerosis forms an important factor in the hypertrophy of this gland, while, on the other hand, the neoplastic theory has been mentioned, and the fact of new growths has received some attention.

The infection theory has been claimed by a great many men, and gonorrhea has been blamed for hypertrophy of the prostate. It is thought that the secretions collect in the narrow excretory ducts and produce a chronic inflammation which, in time, causes prostatic hypertrophy.

Keyes has taken one hundred cases that were treated in his father's office, and who had reached the age of fifty years or over, and found that only five per cent suffered from prostatic trouble and required treatment following an early attack of gonorrhea.

So, in summing up the etiology of the cause of prostatic hypertrophy, one can almost say -- Tell me the cause of fibroids and I will tell you the cause of prostatic hypertrophy.

In considering the pathology of the prostate it is maintained by some that the principal lesion is fibromyomatous in character, while others claim that the essential process is distinctly glandular. In the latter instance, the enlargement is mostly found in the triangular shaped posterior median space, sometimes called the middle or third lobe. However, this may involve the lateral lobes as well.

The gland being covered by a firm fibrous capsule, the organ often has a smooth, round or oval shape. These growths may predominate in the glandular substance or upon the surface. In the latter instance they project towards the urethra or bladder.

For clinical consideration the subject of prostatic hypertrophy may be summed up into the following pathological conditions:

Hypertrophy of one or both lobes, hypertrophy of the median portion itself, hypertrophy of the lateral lobes with bar formation, hypertrophy of the lateral lobes and me-

dian portion in the shape of a sessile or pedunculated tumor of the middle lobe.

With the enlargement of the prostate there are more or less structural changes in the deep urethra. The mucous membrane becomes thickened and the urethra elongated, and the normal curve is changed, and the lumen of the canal is narrow and its course is irregular. With this condition present the dilatibility of the prostatic urethra is lost and the function of the vesical sphincter is impaired.

As a result of these changes the function of the bladder is much interfered with, and some of the urine passes into the prostatic urethra, while the rest lodges in the post trigonal pouch, which the bladder is unable to evacuate, and therefore becomes residual urine. This soon forms structural changes in the bladder itself, and the muscle fibers become greatly hypertrophied, so that its carrying capacity is much decreased.

In such cases this condition may be further complicated by ulceration of the tissues overlying the enlarged gland.

The disturbances to which prostatic hypertrophy may give rise depend upon the seat of the enlargement and the change in the prostatic urethra. In many cases the symptoms are not marked until the prostate is well enlarged, and then the symptoms may develop very rapidly.

One of the first symptoms that the patient complains of is difficult urinations. These are generally greater at night than in the day time, for when the patient lies in bed in the horizontal position there is a congestion of the neck of the bladder and the prostate.

On rising in the morning the patient passes very little urine, but has a frequency every hour or so, more according to the position he assumes. This is due to the bladder not being able to contract normally and expel the entire contents. The stream is slow in starting and the reflex mechanism is faulty. In such a condition the muscles of the neck of the bladder are not strong enough to meet the resistance, and as a result there is dribbling at the end of urination, although dribbling at the end of micturation is not a sure sign of prostatic hypertrophy, because this condition may be present in cases where the

urethra is getting old and cannot contract as well as in the normal state. In such cases the muscles around the bulb are not vigorous and will not control the stream.

As the condition of prostatic hypertrophy progresses diurnal frequency occurs. With this the size and the force of the stream is decreased while more or less dribbling is present at the end of urination.

The severity of the symptoms may vary according to the condition of the mucous membrane of the bladder, amount of residual urine, degree of stenosis, and the mode of living.

Sudden changes in the weather where the temperature is lowered and the air becomes chilly and damp, along with an over-distended bladder are great factors in the causes of retention of urine.

If men, when they reach the age of fifty years, would take more care in protecting their bodies against cold and dampness, I believe that only one-third of the cases of retention would present themselves.

If patients that are troubled with retention would remain inside on rainy days, or when traveling would wait and ride on a street car or other means of transportation at the end of their day's work, the disagreeable symptoms that present themselves in prostatic hypertrophy would be lessened to a large extent.

As a result of residual urine in the bladder, a decomposition takes place by which the bladder and prostatic urethra are likely to become inflamed, irritable and painful, which will cause the patient an increased desire to urinate.

Patients suffering from retention soon have the urine loaded with pus and mucous which has a very disagreeable odor, and is generally alkaline in reaction. When this condition becomes advanced the infection may ascend up the ureters and involve the kidneys causing pyelitis or pyonephrosis.

In cases of retention, and where the bladder becomes over distended with urine, some state that the damming back of the urine will cause a distended kidney. This I do not believe. When the bladder is filled to its capacity, it will not allow urine to flow back into the ureters, for the opening of the ure-

ters have a valve by which the urine cannot dam back. The damage is done from above downwards. In such cases urine is secreted into the ureters, and when filled, they dilate and finally cause destruction of the kidneys.

The constitutional symptoms which may be complained of by the patient are more or less pain in the testes, scrotum, glands, penis, deep perineum, bladder and rectum. Generally when hematuria is present it is due to some ulceration along the tract.

In making a diagnosis of prostatic hypertrophy one must be careful not to confuse it with atrophy of the gland.

Other cases that are confusing are heart disease, inflammation of the kidneys and bladder, stricture, cerebral and spinal trouble.

Congestion of the prostate may be caused by heart disease, and if the urine is over-acid in reaction it will excite the condition to a farther extent. In such cases if doses of sodium bicarbonate, helmitol or hexamethylenamine are given the acidity of the urine is reduced, so that a diagnosis is more easily made.

In such cases catheterization should not be performed as infection will generally follow, and should the patient be in poor health, it may result in his death.

When examining the prostate it is well to have the bladder emptied, for a physician may easily mistake a thickened, distended bladder for that of prostatic hypertrophy.

Mistakes of prostatic hypertrophy have often been made when atrophy has existed.

I believe that catheterization very seldom causes infection of the bladder in cases of prostatic hypertrophy. The infection is caused by the congestion that is present, this forming a suitable soil for the growth of bacteria.

If one is careful of sterilization and not cause trauma of the urethra in passing an instrument, there is hardly any fear of infection.

It is surprising to see what resistance the bladder will offer to infection, for we see so often cases in which the patient never tries to be antiseptic, and infection hardly ever takes place.

In cases where the bladder is over-distended with urine and the contents is withdrawn, the bladder should be refilled with some an-

tiseptic solution, such as a two per cent boric acid, normal salt solution, or sterilized water, and then gradually drawn off. When infection is present it is well to use a more powerful antiseptic solution, such as nitrate of silver, protargol or sophol. My experience has been that silver nitrate solutions produce too much irritation in most cases, and for this reason I have substituted sophol, a silver preparation which produces very little irritation, if any.

The fact that certain nerve lesions manifest themselves about the time of life that hypertrophy of the prostate takes place will mislead one sometimes in making a diagnosis.

In cases where there is superficial loss of reflexes and one in considering prostatic hypertrophy, then it is wise to pay more attention to lesions of the cord, for in such cases one is liable to find that he is dealing with a nervous condition and not one that involves the prostate.

In some of the very early cases of locomotor ataxia, where the bladder symptoms are present, it is easy to mistake this condition with prostatic hypertrophy.

This is due to a beginning degeneration of the posterior nerve roots and the posterior columns of the spinal cord by which the nerve supply to the bladder is being interfered with.

In order to have a complete emptying of the bladder, there must be a normal condition of the muscles and nerve supply to the viscera, so that a complete relaxation and contraction takes place.

When the bladder becomes filled with urine the sphincters become irritated and send a warning to the brain that this reservoir must be emptied. This is accomplished by reflex action, whereby there is relaxation of the sphincters and contraction of the muscles of the bladder wall, resulting in the patient voiding his urine.

Should there be a change in the nerve supply, due to tabes, this action will not take place, and the patient will not be able to empty his bladder. As a result there will be retention of urine which will soon decompose and produce a cystitis, which, in some cases, will be mistaken for prostatic hypertrophy.

In cases where the more pronounced symptoms of tabes do not present themselves the cystoscope is a valuable instrument in clearing up a diagnosis. The bladder is seen to be trabeculated, showing that there is a change in the nerve supply, whereby the muscular contraction is impaired and complete voiding of the entire urine does not take place. Thus, the urine that collects soon deposits urinary salts in the folds that are thrown up in the bladder and starts a cystitis which may be thought to be caused by prostatic hypertrophy. In such cases a diagnosis of locomotor ataxia can be made by means of the cystoscope long before the true symptoms of the disease present themselves.

A case of a thickened bladder wall, the results of chronic cystitis, may be mistaken when examined by the rectum for prostatic hypertrophy.

To overcome this condition it is well, when examining the prostate, to place the patient in the knee and chest position, so that if any urine is in the bladder it will fall forward on rectal examination. In doing so all mistakes in having the finger come in contact with a thickened bladder will be overcome.

Bladders that become thickened and are all worn out will not contract and expel the entire amount of urine; thus we have retention. In the catheterization of such bladders the urine just drops out, which shows no muscular tone of the bladder wall.

These cases are generally ones of neglected stricture and with them we are liable to find more or less destruction of the kidneys. In such cases it is well to carefully examine the kidneys, and more so in patients that have reached the age of fifty or over and are constantly complaining of indigestion.

Men who have passed middle life and are constantly complaining of frequency due to infected bladder are more liable to be suffering from pyelitis or pyelonephritis than from an infected urethral canal.

The constant infection coming from the kidneys will soon cause a cystitis which, in time, produces a thickened bladder wall, which will result in loss of muscular tone of the bladder. In such cases it is easy to mistake a thickened bladder wall for prostatic hypertrophy.

When a patient presents himself for examination it is well to follow a certain system. By so doing one is more likely to make a thorough and careful examination.

I have divided my examinations into two stages, namely: First and second.

The first stage is where the patient presents himself for examination. Here it is well to sit down and have a general talk with the patient, learning as much as possible about his mode of living, and at the same time taking a sample of urine, go over the heart and lungs, and the vascular system, and take the blood pressure. Following, the prostate can be examined by the rectum, the patient taking the knee—chest position. This ends the first stage of the examination, and the patient is asked to return in three days, during which time he is placed on some urinary antiseptic, such as hexamethylene or helmitol.

On the second visit the urethra may be explored by a sound or some other instrument that the physician may see fit to use.

After the examination of the urethral canal a catheter is passed into the bladder to determine if there is any residual urine, and if so, how much. Should a residual urine be present to more than six or eight ounces, it is well to replace the amount drawn off by some antiseptic solution, such as boric acid, silver nitrate, protargol, or sophol. By doing so you protect your patient from disagreeable symptoms of cystitis that may follow in cases where this is not done.

If one can make the arrangements, it is better to carry out the examination at the patient's home, for by doing this he is not subjected to cold or dampness, and at the end of the examination he will be able to lie down, which is a great comfort to him.

Cystoscopic examination may be included in the second stage, but only in cases where it is needed.

In considering the treatment of the prostate one may divide it into three stages, namely: the first, second and the third.

The first stage is where no residual urine is present and the symptoms are not marked. In this stage, if the patient receives good attention, and all precautions are taken, no trouble will be experienced and operation is not necessary.

In this stage the patient should be warned as to the mode of living. Special attention should be paid in guarding against congestion of the neck of the bladder, wet feet, and exposing the body to cold and dampness.

One should see that the bladder is emptied and not allowed to be over-distended with urine. Frequent examinations of the urine should be made to see that acidity does not become abnormal, and if it does, suitable drugs should be used to reduce it.

The bowels should be kept open and the patient should have at least one movement daily.

Locally such treatment as massages of the prostate, or the passing of a full size sound will keep the circulation before and behind the gland in normal condition.

The bladder should be exercised by keeping it emptied when filled with urine, and at no time should the patient allow it to be over-distended under any conditions.

The second stage is where residual urine is present.

This condition goes from a small amount to complete retention. In cases of marked hypertrophy with residual urine of two ounces operation should be advised. In this condition, with a very small amount of urine present, it makes a very good time for the physician to talk operation with his patient. Here he can explain the good result that will follow at this stage and also picture to him the results if the treatment is not carried out. He can safely state that as years pass on the trouble will increase, which will finally make life very uncomfortable. Explaining these conditions may mean a great deal to him in later life. He can be assured that in cases where there are not over two ounces of residual urine operation is safe and a cure can be produced.

This is the successful stage, while in the third stage the symptoms can only be relieved and no cure produced.

While lesions of the heart, lungs, kidneys and diabetes mellitus may complicate the operation in the second stage, a great deal can be done to improve these conditions under suitable treatment, so that the patient can be placed in good condition for operation. When such diseases complicate operation, the pa-

tient can be put to rest in a hospital and if he is suffering from diabetes the sugar can be reduced to a small amount, where operation can be performed. The heart, lungs and kidneys can also be improved in a like manner.

Should ether be contraindicated, then some some local or spinal anaesthetic can be used in the course of the operation.

Kidney lesions are few where operations cannot be performed.

The third stage is where there is complete retention, and here one must operate or place the patient on catheter life.

When once a patient is placed on catheter life it will be hard to have him discontinue this line of treatment and submit to an operation. So in some cases it is wiser to insist on operation at the start.

After a patient is started on catheter life, he generally loses thought in antiseptic precautions and it is not long before he has the entire tract infected.

Catheter life is generally a gradual suicide of the patient. In cases where there are only two ounces of residual urine, and such a patient is placed on catheter life, I believe the physician doing so is the cause of his death.

Cases of the second stage that have a residual urine of only two ounces and are placed on catheter life have a mortality of one hundred per cent, while those that are operated upon have only five to six per cent.

Before considering operation for prostatic hypertrophy one must first see that the patient is in the best possible physical condition. It is well to remember that we are not operating for prostatic hypertrophy, but for the obstruction that is causing the retention.

Most cases that present themselves for operation are in the third stage, and therefore, we find more complications confronting operation.

Generally the kidneys of such patients are not doing their correct amount of work and the elasticity of the organs is very poor. Therefore, before any such operation is performed one should know the working function of both kidneys. For doing this we have a number of tests that are used by different operators. Of these we have the phloridzin, methylene blue, indigo-carmin, and the sulphophenothaline tests. I have used

the sulphophenothaline tests and find it an easy and uncomplicated test to perform. Reports to date are very satisfactory and those using the test report good results.

The greatest complication in prostatic operation is the kidney, and secondarily we may consider the skill of the operator. Of the two I believe the kidney is the more important, and for this reason it may be called the key note of the situation.

A kidney has a certain range of elasticity and can be forced to extend its work to a large per cent. By this means if a patient is placed at rest in bed and given large amounts of water to drink, the kidneys will become more active and secrete large quantities of fluid. In such cases a polyuria is established which show that the kidneys are in good working condition and capable of extending themselves.

When infection takes place, due to retention, this is caused by bacteria that is always present in areas of congestion.

We have two ways of protecting ourselves from infection in cases of retention. First, by drawing the urine with a soft rubber catheter, and then replacing a solution of boric acid in the bladder to take the place of the amount of urine that has been drawn out.

Second, you may pass a soft rubber catheter and draw off the amount to where the patient is relieved, being sure not to draw off the whole amount at once. After this the patient is catheterized every few hours for the next two days, removing the amount that collects between each catheterization. The amount that is to be drawn at each catheterization can be judged by the supra-pubic tumor and the feeling of the patient.

By carrying out these two methods we are able to avoid infection of the bladder.

When catheterization is to be performed the choosing of instruments will depend upon the condition of the urethral canal.

In about one-third of the cases we are able to use a soft rubber catheter. Failing to get into the bladder by this method, we may then resort to Coude, bi-courde, or a pointed Boudie catheter. These failing, we may then try a soft rubber catheter with a stylet.

Generally, by combining these methods, we are able to get into the bladder and relieve the patient.

The silver catheter that is used by a great many of the physicians I believe should never be used in cases of retention, for it produces too much trauma of the urethra and has to be withdrawn after catheterization. This point is a very important factor, for should continuous catheterization have to be performed, we may not be able to get a catheter into the bladder on account of inflammation following the trauma produced by the passing of the silver instrument.

A gum elastic catheter with a stylet will answer the same purpose as a metal instrument, and in a good many cases you will be able to get by where it is impossible with a silver catheter. There are certain movements that we are able to get with a soft rubber catheter that are impossible to get with a metal instrument.

After the catheter has been placed in the bladder, and one desires a continuous drainage, the stylet can be removed and the catheter retained in place without making any change. This item alone helps greatly when one is confronted with retention due to hypertrophy of the prostate.

An anaesthetic should never be given to a patient unless the surgeon is prepared to do an operation in case he cannot enter the bladder by means of a catheter to relieve the retention.

The reason for this is that if an anaesthetic is given we are liable to injure or rupture the urethra, for the patient cannot tell when we are forcing too hard and doing damage. A patient's advice when passing a catheter is the best guide to go by.

If all these methods fail in entering the bladder, then we must resort to operative procedure.

In considering operation for prostatic hypertrophy there are two routes of choice, namely, the suprapubic and the perineal. These have their special indications and followers.

Among the operators in the field of this line of work we have a divided idea in regard to the better way of removing the prostate. Some choose the suprapubic, while others prefer the perineal method. This division I believe is due to how familiar one becomes with the structure that involves the

method that is chosen. For example, may cite a man like Hugh Young, of Baltimore, who prefers the perineal route, for I believe no one in this country at the present time is more familiar with the anatomy of the perineum than he. On the other hand, Freyer is a strong believer in the suprapubic route, for his well trained knowledge of the anatomy of the bladder and its surroundings make him a very skilled operator in removing the prostate by this method.

Of the two I believe the suprapubic is the simplest, and less danger is done to the sphincters at the time of operation.

But what objections are there to the suprapubic operation? First, there is greater confinement to bed after operation, and second, the mortality is about double that of the perineal route.

The fact that prostates are removed at about middle life or after, makes it unwise to keep this class of patients in bed too long, for there is danger of congestion of the lungs and death following from pneumonia and not from the effects of the operation.

Hemorrhage is another great factor to take into consideration, and I believe that we are liable to have more hemorrhages from the suprapubic route than from the perineal. Freyer, however, denies this, and the reason may be that his skill is such in removing the prostate by this method that he experiences very little bleeding. However, a great many operators have had fatal hemorrhages resulting in the patient's death.

The average mortality in this country is about five per cent by the perineal route, while by the suprapubic it is about ten per cent.

In removing the gland through the perineal route it is more difficult and the surgeon must have a very good knowledge of the structure in which he is operating to insure success. By this method the hemorrhage is not so great and the shock is lessened. In favorable cases the patient is able to get out of bed on the third day, which means a great help to his recovery.

How shall we choose between the two ways of operation for the removal of the enlarged prostate? I believe that this question can only be decided by the operator. If the sur-

geon feels that his knowledge of the perineum is not up to the standard then it would be better for him to choose the suprapubic route. The patient's risk would not be so great and the damage done not so troublesome.

In cases where the prostate is found to be extremely large on examination, and confirmed by the cystoscope, it is then well to remove it by the suprapubic route.

In cases where patients present themselves with complete retention and no instrument can be passed, suprapubic tapping has to be done. The bladder is then drained for two or three weeks and if the patient at the end of this time is in good condition, prostatectomy may be performed. In such a case a suprapubic operation would be the one of choice.

In cases of prostatic hypertrophy where one is not certain as to the extent of the enlargement of the lobes of the gland, a cystoscope may be of great help in clearing up the diagnosis.

I believe that only in cases that we are in doubt as to the shape of the prostate should the cystoscope be used. The infection and inflammatory reaction that is liable to follow in such cases is a great deal worse than the good obtained by the view through the scope. I believe that the cystoscope should be limited to certain cases, and every patient with an enlarged prostate should not be submitted to examination by this instrument.

Under prostatic hypertrophy malignancy of this gland should be given careful consideration, for it is observed from early childhood until late old age. Carcinoma is more prevalent in later life while sarcoma is found in early years. It has been noticed that during the middle period of life the gland is free from any malignant growth.

The fact that malignant conditions of the prostate are more prevalent than the physician imagines is due to the patient not presenting himself for treatment until symptoms present themselves. Thus, a number of cases are not recognized until after operation. It is known that malignant conditions of the prostate may exist for years and the patient do well when no operation is performed. These patients may live for years and finally die from some other disease.

It is claimed that about fifteen per cent

of all enlarged prostates are malignant, and that ten per cent are not recognized at the time of operation, but only revealed on examination by the pathologist. Usually one can be moderately certain of cancer of the prostate on gross inspection when the operator's knife passes through the capsule and comes in contact with dense tissue that does not bulge at the edge, but is firm and rigid.

The etiology of carcinoma is unknown, the same as the disease is elsewhere. The growth is very slow and metastasis are somewhat rare. In such cases there may be no glandular enlargement, and if present, be so small as to attract no attention. The growth may spread to the bladder wall, prostatic urethra, rectum, vesicles, and sometimes to the anterior urethra. When glandular involvement takes place the retro-perineal and mesenteric glands are the first to be involved, then the inguinal glands follow later.

When cancer of the prostate is present the bladder and posterior urethra become very sensitive when instruments are used. Frequency is generally present and disturbs the patient to a great extent.

In cases that have reached the age of fifty years or over that present themselves for treatment and on examination show a very sensitive urethra, then one should be on the lookout for cancer of the prostate. In such cases hematuria may be visible to the naked eye or microscopically.

As the disease progresses pain is generally felt down the back of both legs. With this there is a marked cachetic condition with dysuria and bloody urine. These symptoms with enlarged inguinal glands only require a rectal examination to confirm the diagnosis.

Although we see many glands that the diagnosis can only be made by the pathologist, yet, with one who has sufficient training in the examination of the prostate, there is a certain hardness to the touch of the finger that will suggest cancer when the patient is examined by the rectum. But in the beginning of the early cases this condition does not exist and a diagnosis is not easily made.

When pain is referred to the hip joints and along the sciatic nerve, with enlarged inguinal glands and a hard nodular prostate, one should be on the lookout for cancer.

In the treatment of cancer of the prostate it is better to consider it under three heads,

namely: Preventive, palliative and curative.

Under the head of preventive treatment it would be wise on the part of the profession to see that all cases of gonorrhea that are acute are prevented from becoming chronic, and such instructions should be given the patient to bear weight on the case. He should be told of the results that will follow neglected cases that are not properly treated and should be warned as to the chances of malignant changes that are liable to take place in latter life.

It is evident that chronic posterior urethritis and prostatitis are associated together, and that these conditions may produce prostatic hypertrophy which, in turn, plays a part in the formation of cancer.

In considering the palliative treatment, the fact that cancer of the prostate generally spreads by metastasis, which causes a general infection of the surrounding parts, makes operation hopeless when the disease is discovered. Generally the cases that are operated upon soon become worse and are only followed by death.

In cases that are far gone best results are obtained by suprapubic drainage. This has the advantage of perineal drainage as that it is not liable to be followed by ulceration that will puncture into the rectum or bladder. If obstruction is present, then it is wise to perform suprapubic drainage. A curative effect can only be hoped for when the prostate is removed before metastasis has taken place.

It is hoped that more attention will be given to the early recognition of this disease, so that more can be considered under the curative treatment.

DOES NOT SCIENTIFIC MEDICINE CALL FOR CHANGE OF SPECIALISM?*

By A. A. Bondurant, M.D.,
Cairo, Ill.

"Medicine" and by that I mean that science of healing, or relieving the abnormal condition of fellow beings, whether by the so-called general practitioner or specialist; the latter having increased by strides since

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the barbers were surgeons—then they were the skilled mechanics, with sharp cutting instruments for their recommendation. Since then the specialists have multiplied by division and subdivision, until most every important part of our anatomy has its medical friend, who lends its importance, and by actions if not words, minimizes the remaining anatomical parts without which his idol could not have existed. I could not, nor would I, detract from the grand achievements of specialists, from the beginning to this moment, and you, if you wish, delve beyond the Laurentian Library, in Florence, in which within the choicest room lies the celebrated “*Medicean Virgil*.” Mankind has ever honored the practice or art, now science of medicine—please remember—now, science of medicine—for the old stock is going to be disposed of, slowly at first, but rapidly within the near future, when an invoice of specialists will not reveal their identity by size of hand-bag, tone of voice, or blood in eye, but by the essence of concentrated thought, gleaned from analytical study of man, normal and abnormal, and the cause of the latter which necessarily implies, as far as possible, the removal of the cause.

The new era of specialism will not be recognized as now by an anatomical line of demarcation distinctly drawn—as eye, ear, nose, chest, abdomen, genito-urinary, rectal, skin, orthopedic, nervous, tropical, atropical, heart, lungs, kidney, stomach, circulatory, feeble minded, insane, (pardon the digression) why has not some enterprising M. D. made a specialty of “attention to intelligent people?” I cannot enumerate all, but will mention a few more: the surgeon, gynaecologist, children, male, female, and we even read of specialists for the fat and lean. The future specialist will, first, be a diagnostician, that is what every M. D. should be, for without it he is not a physician, simply an imitator, or a mechanic, of which there are many grades. Once a diagnostician, (not by proxy) as, “Dick” says urine is so and so; “Jerry” says stomach is so and so; “Harry” says reflexes are so and so; “Sam” says field of vision is contracted, right eye astigmatic and vision in same 20-40, left eye vision equals 20-200, but can’t find the cause; a surgeon may be inclined to place

more importance upon those findings which indicated the necessity of a brilliant operation; if an internal medicine man, he may stand by the opposite side of the equation as given to him. The one who does the work has a different spirit leading him, as his personal equation yields to the evidence that is clear cut, because it is more certain.

Here beginneth the future specialists: Tuberculosis infection, which includes every organ in our bodies, so of syphilis, typhoid, malaria, rheumatic, cancer, streptococic, diplococic, alcoholism. You may be an expert at syphilis, but orthopedic surgeon will draw the line if you approach the syphilitic joint. The skin man will defy you, the oculist ignore you. The streptococic endometrium and tube following confinement may cause a ruffle between the obstetrician and gynaecologists, by crossing the imaginary line between bread winning domains of adjoining neighbors, the obstetrician’s herd has entered the gynaecologist field, who proceeds to reap the harvest, practically because of the time-honored argument, “Possession is nine points in law.” “O” imported, nourished, and multiplied cocci from 1 to 8 or 10 days, receiving from ten to forty dollars for his service, “G” receives from one to five hundred dollars for a much less expenditure of nerve force and labor; other things equal, “O” was the better prepared to muzzle and destroy the enemy, he having observed his peculiar mode of invasion and degree of resistance.

In the year of 1865. Robley Dunglison describes a specialist as, “One who devotes himself to a specialty; as to diseases of particular parts, as of the eye, ear, chest, and etc.” As practiced today the great lexicographer’s definition would need no revision. In 1904, Prof. C. M. Stevens’ Revised Common Sense Dictionary says, “Specialists, a person who devotes himself to, or who has a special knowledge of some particular subject.” The latter explanation is nearer in keeping with the known truths of this period, but has not been accepted by our specialists. Is diphtheria a disease of the nose and throat, and so treated, and conceded as the property of the specialist? Answer. No—the up-to-date medical man immediately proceeds to secure and administer the remedy—usually in side

or back of infected child, because that part of his anatomy is best suited to receive the specific remedy. Search the store-house of your knowledge and mention the disease, or diseases, purely local to any organ of man. Not a disease of heart, lung, stomach, kidney, intestine, bladder, bone, muscle, and etc., but an infection which has invaded heart, lungs, etc., and is pronounced a disease of a special organ because its local manifestations are more pronounced. I cannot recall an infection which is technically local. The meningitis infection (epidemic) has been found in the nose and throat of patients, but within the cerebro-spinal cavities they seem to be at home. Other pathological bacteria produce cerebro-spinal meningitis, yet differing in some respects, requiring different treatment, their most prolific field of action being other organs necessitating a remedy somewhat different, because of different toxins, if best results are expected. So in this a specialist would not be a specialist for the brain and cord, but a qualified bacteriologist, who can utilize both positive and negative evidence. The best and only scientific management of such is to withdraw some spinal fluid, search and find the enemy, and treat accordingly. Puncturing the spinal canal is a delicate surgical procedure properly done, yet who calls the specialist to perform the task?

To follow the rule which was recently attempted to eliminate all so-called internal medicine men from using a surgical knife, would, if applied to all alike, confine surgeons to traumatic surgical cases, for they and only they are truthfully local. Can all medical men do surgical work? No; but the percentage of medico-surgical men is fully as high as that of surgico-medical, and he who claims for himself and kind, a superiority entitling them to special privileges, or correctly speaking, seek and demand the curtailment of privileges from their equals leaving the self constituted judges monarch of all they survey, have forgotten one of the principles set forth in the declaration of American Independence, and one of the most beautiful attributes of civilization, **Modesty** as taught by their mothers from early infancy. The best surgeons of today are those who know most scientific medicine and practice same. Save the race

from the ravages of those who boast, they know nothing save one of the numerous so-called specialties, as any one is but a fraction of the whole. Many mechanics are used in the construction of a locomotive, each his part which he knows, but when the locomotive has been assembled and placed for duty, to whom is it intrusted on the mission of life or death—a mechanic? No. An engineer, who is supposed to be familiar with all parts, and he must be if he is a high-grade engineer.

It is not my province to draw anew imaginary lines through human anatomy and label each section, that future medical men might each take his choice for a specialty, and by close application to same, obtain superior skill, which would seem unnatural, as some specialists would unconsciously paint the map of the medical world as now exists.

The greatest physicians today (and by that I include every specialty) are the best diagnosticians, clear-cut, analytical; monarch of all he surveys; is mentally and scientifically qualified to do the best for any defect found in any part of the body.

The thought confronts me here that scientific medicine pleads for few specialties, not limited by anatomical lines, but by the ravages produced by the direction and scope traversed by the cyclone. Knowing the enemy and its customs, one may elect to combat a certain class of infection, and they permeate the entire system, then in that sense he would be a specialist. Should he conquer with serum, antidotes, or combinations, honor him, for such is his dues. Failing, discredit him not, for if abscess, paralysis, hypertrophy, atrophy, necrosis, distortion, dislocation or fracture be left in the wake, he is best prepared to carry out or suggest treatment. It has been said one may be an operator and not a surgeon, but a surgeon is both. One who is skilled in operating and is not an analytical diagnostician should be leased to the latter, or enter other fields of labor, for his knife is far more dangerous than that of the diagnostician. The ideal is a diagnostician, therapist and surgeon. The so-called internal medicine man and the surgeon take in the whole field of our professional work; others have taken a small section, side-stepped

and by close application (some) have become more efficient in surgical manipulation and possibly medication in some instances than those not limited. Do not understand me to advocate the doctrine that all physicians should do everything brought to him. One not an anatomist has no right to practice surgery. One who does not know the tension of an eye is normal, plus, or minus, has no right to prescribe for that eye, neither should he prescribe for an ear unless he is familiar with normal color and tension of the drum. If we have not studied the normal nose, septum, turbinates, and their relations to each other, then keep out. I have been told a man cannot be informed upon all those branches which are simply component parts of the whole without which we could not be. Never changing save abnormality, an average man deceives himself in the thought that he can not master it. Could all people of this community who, when babes, are given oil, paregoric, sage tea, and carried about by different members of the family from 8 p. m. till sunrise next day on account of colic (supposedly), the good doctor having been with them since midnight, appear in a body and remind us that they fell asleep after the most miserable twelve hours of their existence, because an over-distended middle ear from an acute infection, had ruptured the membrana tympani, giving a measure of relief, we would blush with shame. Could we excuse ourselves because we were not specialists? Positively no. Can an internal medicine man keep half a dozen specialists with him for emergencies? Then what should he do? Stand erect, master the anatomical, scientific and practical elements of our profession and hurl defiance at the posers who either lack the energy or ability to do a thing so essential.

PULMONARY OEDEMA, WITH ESPECIAL REFERENCE TO PREGNANCY.*

By W. L. Medling M D.,
Dyer, Tenn.

Definition: An exudation of serum into the pulmonary interstitial tissue and the alveoli of the lungs, characterized by dyspnoea cough and a frothy expectoration, often

either blood streaked or enough blood mixed with it to give it a sooty color after standing in a vessel. It can scarcely be considered as independent trouble, but as a secondary complication produced by stasis, as when the outflow of venous blood in the right ventricle meets an obstructed circulation in the left ventricle, as in cardiac disease; or when the lung tissue itself is inflamed or where there is an increased fluidity of the blood added to an increased tension in the pulmonary vessels. This may occur with a weakness of the left heart out of proportion to the right, thus increasing tension in the pulmonary capillaries until a transudation of serum is produced. Weakness of the right ventricle might cause it, or with a normal right ventricle with a weak left ventricle or even an obstruction in the aorta, or any cause producing a damming-back condition in the blood. There are two forms: A collateral or inflammatory oedema, which is usually local; as in pneumonia, abscess, infarction, or in any local inflammatory condition of the lungs; or in a hypostatic congestion and general pulmonary cedema. If with this type congestion be associated, and it may or may not, the sputa is blood-tinged or, after collected, is sooty, but if not it is clear. It is sometimes a terminal condition to alcoholic excess, valvular affections of the heart, fatal anemias cerebral lesions, as hemorrhages and traumatisms, and acute infectious fevers when there is a cardiac failure. There are perhaps instances in which it has occurred as a result of vascular relaxations, in which instance it would occur suddenly as in labor. It may occur from increased permeability of the vessel walls due to an impairment of their nutrition and disturbance of the cardiac pulmonic innervation, as stated by Hurchard. Septicemia and cachectic states; also infectious diseases may precede it, but in most instances the toxic conditions most favorable for its production are Bright's disease, eclampsia and uremia, and especially so when they come up during pregnancy, and this is the phase to which I shall direct most attention.

Why does it occur more often in pregnant women? Because the pregnant woman approaches the border line of a pathological state so nearly that it is often hard to say

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when she has crossed it. Frequent micturition in the beginning of pregnancy is a common symptom, and on the contrary, later there may be a retention due to compression of the urethra. Not infrequently the urine contains sugar and a small amount of albumen, but such glycosuria and albuminuria are only on the border line of a pathological condition. The thyroid gland with its metabolic function swells to return again to its normal after-labor. The liver, the great laboratory of the body, whose function is to break up complex bodies into simpler ones and handle toxins, is often overworked, aside from being compressed. The total quantity of blood is increased as well as changed in composition. It contains more water, fibrin and white corpuscles and less hemoglobin. A constipated bowel is often associated, lessening elimination through one of its avenues. The nervous system is often in a state of excitement, for the expression has been handed down, "in sorrow thou shall bring forth children." Even though the primipera may be happy at the thought that she is soon to go through the last stage of physiological development peculiar to her sex, and perhaps with the thought that it might perhaps be one of nature's favorites, whatsoever the social position, most women approach confinement with a serious turn of mind and it approaches apprehension and dread and sometimes despair.

Taking into consideration the extra tax on the metabolism, secretion and excretion, then add to this the changed condition of the blood, the tendency to oedema and the excitement and anxiety associated, and we see here the most productive field for oedema, because at this time the functions of the entire body are more or less embarrassed, and yet no definite pathology exists.

The liver, spleen, stomach and bowels have been spoken of as "the vicious circle." In the pregnant woman the liver, kidneys, bowels and blood might be considered the vicious circle and a derangement of either might produce a change that would cause serious thought and perhaps much trouble. Uremia, eclampsia and oedema are very closely allied as to the primal cause, but showing up as different clinical manifestations. Belief is fur-

ther strengthened by clinical observations, as any two of them may be associated. Perhaps in uremia the kidneys are most at fault, in eclampsia the liver, and in oedema of the lungs are increased permeability of the vessel walls, due to an impairment of their nutrition from a toxic condition, also a hydemia of the blood as we often find in pregnancy. Behind the three conditions there is a toxic condition, whether the same or different is not explained. Oedema of the lungs, where there is no inflammatory condition, is usually easy to diagnose. Dyspnoea with abundant sputa, either blood-streaked or not, not associated with fever, with an impaired circulation, breathing hurried, labored and rattling, with a constant harrassing short cough is usually sufficient, provided the history is kept in mind, for it is almost always a secondary trouble. Broncho-pneumonia, congestion and hydrothorax being about the only conditions likely to be confounded with it. An elevation of temperature being a symptom only in the inflammatory type or from the underlying cause. Hughes states acute outbreaks of uremia are always associated with an elevation of temperature, so either with uremia associated with it or its cause in this instance we might expect an elevation of temperature, and still behind either or both the primal cause may be a suppression of urine, acute or chronic Bright's disease, parenchymatous nephritis, cystic, tubercular, or cancerous kidney, the puerperal state, operations on the uterus, bladder, urethra or rectum. A recent case of oedema presented some interesting features. Family history negative. Had never had kidney or bladder trouble previously. About one month before confinement feet and legs began to swell and kidneys acted often and in small amounts. The advice of a physician was sought who insisted that she should put herself under his care until confinement, prescribing for her. After taking medicine for about a week, the symptoms somewhat subsiding, she discontinued treatment. On July 8th, at 2 p. m., I was called to see her finding her in the early part of the first stage, kidneys inactive, bowels moved three times that day, some puffiness about the face, legs considerably swollen, some headache that fore-

noon. I hastened elimination as rapidly as possible, for I suspected trouble. At six I returned and at 9 p. m. delivered her of a nine-pound baby. Just after the placenta passed she began to hack, soon after which occurred a very progressive oedema of the lungs, and with my very best efforts I was barely able to save my patient. In a few minutes she was almost gasping for breath, after about two hours' time she got better. Her temperature remained at 101 for three days, gradually subsiding, as did the symptoms of oedema. She did nicely for about three weeks; was up, and the former symptoms began returning, soon followed by another attack of oedema, followed rapidly by death.

Another case occurred in the second stage of labor with strong pains, and the pain so intensified it she died almost at once. I am only reporting fatal cases to show what conditions we meet in cases that have been neglected. I do not mean to say that it is always fatal, but often it comes almost like a clap of thunder from a clear sky, and unless the case has been under close observation, with but little warning. At such a time the expression of Hare, that "a physician should be a watchman and a therapist when necessary," is truly applicable, for often it takes our best efforts to save life. The treatment is that of the cause, or associated cause as well as meeting the symptoms as they arise. The position of the patient should be changed occasionally to prevent the blood gravitating to the most dependent portion of the lungs. Dry cups placed over the chest often is an aid and at the proper time venesection often gives prompt assistance. Hot mustard foot baths may be of some benefit. An active saline purgative should be given, also diuretics and diaphoretics, that elimination may be as rapid as possible. But while waiting for this there are urgent indications which are to sustain the heart action and limit and lessen the transudation of serum into the lungs as much as possible. Among the useful remedies are atropine sulphate, strychnine sulphate, caffeine citrate, spartine sulphate, digitalin, aromatic spirits of ammonia, alcoholic stimulants and nitroglycerine.

The individual drugs should be selected ac-

cording to the individual case, but perhaps atropine given to its physiological effect, strengthened by either nitroglycerine, strychnine or digitalin, or all, in most instances meet the indications best and they should be used.

THE DIAGNOSIS AND TREATMENT OF PUERPERAL ECLAMPSIA.*

By F. C. Britton, M.D.
Greeneville, Tenn.

A degree of interest gathers about everything pertaining to the welfare of the pregnant and parturient woman from the moment that conception takes place. She begins to bear a burden which demands extra care on the part of herself and friends, that she may pass safely through all its dangers. We are not surprised then to find in the majority of pregnant women more or less toxemia, either in the early or oftener in the later months of gestation. Very few escape some degree of toxemia, even when it is not manifested by any positive symptoms. This leads me to the consideration, according to some writers, to which eclamptic seizures during gestation, labor or confinement are said to occur without warning. As a matter of fact, no eclampsia probably does occur, which does not give preliminary signs of its onset to a careful observer.

The Nephritic type, in which marked albuminuria, high blood pressure and extensive edema occur, is frequently easy of early diagnosis. In the Hepatic type, on the other hand, with slight albuminuria, low blood pressure, edema scarcely noticeable, is much more rare. It is in these cases that one is apt to be deceived by the apparent mildness of the conditions, until after a few days of slight symptoms the patient develops sharp headache, dizziness and convulsions of the severest kind, all within a few hours. These are the cases, too, which most frequently terminate badly in spite of treatment. I do not know any pathological condition which is more easily recognized than the uremia of pregnancy, which accompanies and precedes

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convulsions. Headache, gastric disorder, edema, disordered vision, nervousness and wakefulness, with arterial tension and albuminuria are unmistakable symptoms

In regard to treatment, the fetus participates proportionately in the degenerations occurring in the maternal organism, and, therefore, the interests of the child are the same as those of the mother. Whenever under reasonably vigorous treatment of elimination the mother does not improve, labor should be induced. The further advanced the pregnancy is, the less the attendant need hesitate to induce labor. Near to term labor may be induced on slight indications. This will remove, as far as possible, the dangers of convulsions. On general principles, that method of delivery should be chosen which will empty the uterus in the best way possible. When the patient is allowed to deliver in the normal way she is put to excessive physical endurance. If the cervix is already opened, the forceps or version will deliver in a relatively short time and avoid hours of physical labor; if the cervix is closed and unprepared for labor, vaginal or abdominal section affords the right means of emptying the uterus. The high mortality after abdominal Cesarean Section for eclampsia, I think is due to the fact that the procedure was resorted to as a last resort; if done in time the operation is of slight danger.

In regard to the medicinal treatment, the convulsions must be controlled, and for this purpose I would depend largely upon morphine in moderate doses, 1-4 to 1-3 gr. hypodermically; also veratrum hypodermically, from 15 to 20 drops, or even more if necessary to keep the circulation or pulse down to 50 or 60. Catharsis and bleeding often proves beneficial; the use of normal salt solution will stimulate renal secretion and favor perspiration, and is beneficial in lots of cases. In all measures taken for the relief of eclamptic patients the keynote is elimination. The eclamptic patient requires the closest attention, and with sustained effort it will be possible to guide many apparently hopeless cases through this terrible condition.

WHO IS THE DOCTOR'S GREATEST ENEMY?*

By J. W. Cox, M.D.,
Johnson City, Tenn.

Every animate and inanimate being has its war of existence both in its own family realm and with its antipodes. Featured in some deceptive form by appearing something they are not; the leopard has his spots and the tints of his fur resemble the surrounding cover to deceive his prey. The animals of the arctic wear their coat of white because the background of that distant country is snow: if these animals of prey were black they would starve to death. The reptiles of the earth that are the most harmful have the covering of their surrounding so as to exist by deception. It is not the intention of the essayist to make the impression that the Creator put warring and ferocious beasts both in man and beast to unjoint the great undertaking of a universe, for, on the other hand than the deceptive creation, he would invite you to the beautiful plumage of many birds and the sweet songs of others, which are both beautiful to behold and an unction to hear. So in life we have the beautiful in which there is no danger and their voice is always of good cheer, but mingled with joy and happiness there comes sorrow and distress, and a world which we make it what it is, the most vicious and powerful animals and beasts of the jungles become the pets of those who deem to conquer. There is a mightier power which makes all the warring elements of nature harmonize as the great violinist strings his instrument and makes upon the unharmonious chords beautiful euphonious sounds which man and, we are told, angels love to hear.

While in this introductory preamble I have not said what is the greatest enemy to the doctor, I have led you to a nobler thought that man is the handiwork of the Creator and all nature bows to him because he is made in the likeness and the image of Him who made us. For some twenty years I have been iden-

*Read before Washington County Medical Society, August, 1912.

tified in some way, and at times I thought in a very insignificant way, with the medical profession and not tried to do those things I should have done, and only an example of the duplicity often of what goes to make up the life of many men both in professional and other walks of life, but I have lived long enough and observed enough to have long since realized the waywardness of the profession of which I am a lowly member, having long since been penitent of my past professional sins like the moral sinner. I am penitent and religious for many years, and I can frankly say that the errors and unprofessional conduct of the doctor has cost each and every one a part of his good name and destroyed the good he has done and might have done for himself and family and community. I am more convinced every day I live that but for the viper tongue and warring community, doctors in my early life, and the observation all along the same, my present state both financially and as a citizen would have been much greater and better. The bitter tongue of probably an able doctor has often cost his brother a stain that will not wash off and still the brother was as white as snow as far as his character and professional skill were concerned. You will pardon me for much reference to my professional life and these unkind encounters, for this is my occasion and I am your essayist for the evening, and I am going to say my mind and give my experience and conclusions upon this after a long service in the profession as to who is the doctor's greatest enemy, hoping you may profit by it, as the most of you are my juniors and may have a long professional life before you, and I on this occasion am only an evangelist, asking you to profit by what I say, but not do what I often did in my younger days. I want to say frankly and dispassionately that the greatest reverses I have had in my long professional life, and I might go a little further and say all my reverses and reflections on me as a doctor had come directly or indirectly from a doctor, and I feel that every doctor who hears this tonight can testify the same. I don't mean to say that all doctors are bad, vicious men, but a little leaven leavens the whole loaf, so you have it one or two unscrupulous, unprofessional so-

called doctors in a town or community is a mighty weight and bears your patience and far beyond your power to correct by present or regulations of professional courtesies, you say and I say, I will do my duty toward friend and foe, but to correct the low and vicious in my profession I will ignore and only in case of emergency will I aid such characters for fear of public sentiment, and at the same time public sentiment and opinion that will not down are molded by this herd against you and your professional brother every day, every hour and almost every minute, and any way, upon every opportunity that the vicious doctor has.

If you have a mote in your own eye, remove it from your professional brother, and when the time comes in a man's heart his conscience fails to lash him and his four deeds roll under his tongue as a sweetened morsel, then spit him out.

I love my friends and my true, noble doctors, for I think I have them before and around me tonight, and that the profession of today thank time, patience, manhood and the good ones who have gone that we are only better by having lived with them and after them, and that the last of our days and in the ebbing hours of our usefulness goes shall be the sweetest by reason of the life we have lived in our profession and that we may all die an honored members.

TRACHOMA.

By W. G. Kennon, M.D.,
Nashville, Tenn.

For a long time trachoma was thought to have originated in Egypt, the name of "Egyptian Ophthalmia" having been applied to this disease. Historical researches, however, have proved that this disease has been endemic in Europe since remote antiquity. The condition is mentioned in Eber's papyrus and in a pseudo Hippocratic manuscript. Celsus gives a good description of the roughness of the lid and the purulent discharge which it occasions. The ancients employed scarification in the treatment and accomplished this by

various instruments and by scouring with fig leaves.

Trachoma was first brought prominently before the public during the Napoleonic wars. When the armies of Napoleon landed in Egypt in 1798, they were immediately attacked to an alarming extent by a violent ophthalmia, and this ophthalmia, which proved to be trachoma, they brought back with them on their return to Europe. By reason of the before mentioned fact and the subsequent campaigns of these armies, with the great amount of contact thereby entailed, the disease became widespread and occurred in epidemics.

In the English army in 1818, there were on the invalid list five thousand men, rendered blind by this disease. In the Prussian army, 1813-17, about thirty thousand men were attacked, and in the Russian army seventy-six thousand men were infected in a period of about fifteen years. The description of trachoma at that time shows that the disease was acute in its onset and course. Profuse secretion was the rule; hence the epidemic character it assumed.

In the Orient, at the present time, especially in Egypt, are found these acute cases of trachoma with profuse secretion. The investigations of Zur-Nedden and others, however, have shown that the trachoma of these countries is, as with us, an essentially chronic disease, and that this violent ophthalmia, which occurs especially during the hot months, is due to a superimposed infection, by some organism, causing an acute conjunctivitis. The organisms found to be present in a majority of cases were either the gonococcus, or the Kochs-Weeks bacillus. It is extremely probable that the gonorrheal cases account for the innumerable blind persons whom we find in this part of the world. Practically every native has trachoma, and the trachoma has been blamed for the sightless, whereas it is not this disease alone that is the cause of the condition. The European epidemics were, it is supposed, of the same character as the Egyptian ophthalmia of today. That is, trachoma complicated by an acute infection of the conjunctiva.

Trachoma is a communicable disease, not very violently contagious, and is not carried

ly the air, as was for a long time supposed, but by the medium of infected linen, fingers, etc.—that is, by almost direct personal contact. It is during these concurrent infections, with their profuse secretion, that the trachoma is most violently contagious. The incidence of the disease among the poorer classes, either of our city or country districts, is due to the poor personal hygiene, and the common use of linen. The causative agent in trachoma has not yet been isolated, although it is believed to be a microorganism of some character. Within the past few years there has been described, in the conjunctival scrapings, a cell inclusion (the so-called Prowazek-Halberstadter bodies). These have the appearance of protozoa, and are found in the epithelial cells. It seems probable that they are really some cellular detritus which has been taken up by a phagocytic action of the epithelial cells, or else are some form of degeneration going on within the cell itself. These bodies are frequently found in ophthalmia neonatorum and in semi-chronic conjunctival catarrhs. They are found in the above mentioned conditions in almost as many instances as they are in trachoma, and hence could hardly be regarded as either causative or pathognomonic of the latter.

The changes in the conjunctiva in trachoma are the papillary hypertrophy and the development of the so-called trachoma granulations. The papillae are due to the folding of the conjunctiva, in order to accommodate its surface hypertrophy to the narrow confines of the cul-de-sac. The granulations consist of rounded accumulations of cells, between which is a delicate connective tissue framework. The more peripheral of these cells are lymphocytes, while the interior cells are more of an epithelioid character with a few polynuclear leucocytes. These granulations, as do granulations elsewhere in the body, undergo cicatrization. In this condition the process is very slow, due probably to the continued infection and the development of new granulations.

Sensitiveness to light, lachrymation, gumming together of the lids, constitute the usual symptoms of which these patients complain. Pain, and until later in the disease, disturbance of vision, is rare.

Examination shows a slight drooping of the upper lids, due partly to photophobia, and partly to the weight of the thickened conjunctiva, with some involvement, by the disease, of the involuntary muscle fibres, here situated. Upon eversion of the lids, the conjunctiva of the tarsus and of the retrotarsal fold is found red and thickened, the surface is uneven, due to the previously mentioned papillae and granulations. The granules have been likened to frog spawn in their appearance, and are found principally in the retrotarsal space. These hypertrophies become more and more marked, until at a certain varying height, they begin to disappear, leaving in their wake cicatrices and contractions. It is in this way that trachoma becomes cured.

Complications are due to two conditions. On the transference of the morbidity to the corneal conjunctiva, causing pannus and ulceration. (2) To the contractures caused by the cicatrization, these being the most rebellious to treatment, either medicinal or operative. The pannus, when in its fresh state, will, if proper treatment be instituted, in the majority of cases undergo resorption, and leave no trace of its existence. Ulcers are best treated by the instillation of atropia, and the energetic treatment of the trachoma. Entropion, ectropion, trichiasis, symblepharon, etc., are treated by plastic surgery. The various procedures for the correction of these conditions being too numerous and technical for me to enter into their discussion.

From follicular conjunctivitis, we diagnosis trachoma by the mildness of this disease, the failure of development of complications and sequelae and the ultimate recovery.

From acute catarrhal conjunctivitis, by the course and rapid recovery of this disease.

From Parinaud's conjunctivitis, by the usual involvement in this disease of only one eye, together with the enlargement and usual suppuration of the preauricular and anterior cervical lymph nodes of the corresponding side, which accompany this disease.

You will notice that in most of our differential diagnoses, the clinching point is the recovery of the patient. Trachoma, on the other hand, is an essentially chronic disease, subject to remissions and exacerbations; of-

ten, years of quiescence intervening, wherein we have few or no symptoms.

Trachoma is found everywhere. It was probably brought to this country by the early settlers, and has never been completely exterminated. No race is immune, although the statement is frequently made that this is true of the negro. It is less frequent in this race, this probably being due to the fact that this disease was introduced to the country by the white people, and the association between the races has never been very intimate.

Within recent years the Public Health Service has found the disease to be prevalent among the American Indians to an alarming extent. Especially was this true in the government schools, it being found in one instance that 105 cases out of a total enrollment of 114 were infected. The total number of Indians examined was 39,231. Of these 8,940 had trachoma, or 22.7 per cent.

Dr. Stucky, of Lexington, Ky., has recently brought to the attention of the profession and of the government the prevalence of this disease among the natives of the Cumberland section of Kentucky. Of four thousand people examined by the members of the Public Health Service, 12½ per cent were trachomatous. Of 374 cases seen by Dr. Stucky in 1912, 113 had trachoma, 40 per cent of these with corneal complications; 25 per cent had photophobia; 10 per cent entropion, and 2½ per cent symblepharon. Twenty-five per cent had impairment of vision, ranging from a slight defect to a total blindness.

Among the lower classes of our large cities trachoma is very prevalent, although less so now, that rigid laws against the admission of trachomatous immigrants have been passed, and careful inspection of all school children is made.

The treatment of trachoma has for its object the prevention of corneal complications, and by the control of cicatrization and contraction, the prevention of the lid deformity.

The great variety of treatments advocated have one common end in view—cicatrization. That is the end result of our treatment of the disease. It matters very little what special line of treatment we follow. Whether we scarify or cauterize, the end result is scar tissue, and if we want results in trachoma, we

must prevent the undue contraction of this scar tissue. There is no specific cure for trachoma, and I often doubt if there is such a thing as cured trachoma. The use of copper, silver, instrumental scarification, bichloride of mercury, zinc chloride, etc., have the same ultimate end—eicatrization.

One often sees in the journals and hears from men of authority the statement, "I can cure trachoma in two weeks or six weeks," as the case may be. If they do this, I have never seen one of their cures, and I have heard this statement very frequently. These cases appear to be cured, but they are not. Not if they are trachoma, for the next year they return with their old scars and some new follicles and granules.

Trachoma, like tuberculosis, is patient and awaits its opportunity to strike until we are in poor physical condition. It may be quiescent for years.

We, in a number of cases, render trachoma latent, and in a few cases possibly cure it. In a number of other cases, we operate upon or treat follicular conjunctivitis, instead of refracting them, or possibly do all three, and then complacently pat ourselves on the back and point with pride to a cured case of trachoma, which had we properly refracted in the first instance, would have gotten well of itself. I have seen trachoma which recurred after ten years. I have seen an apparently cured case of trachoma sent away from school by the medical inspector after six months, and I have diagnosed and seen men of wide experience diagnose trachoma on a case which got well when the hyperopic astigmatism, which in most cases causes follicular conjunctivitis, was properly corrected.

The treatment I have found most satisfactory in cases where it is the diseased process, and not the sequelae, such as entropion and trichiasis, is the symptom-producing process, is scarification and expression, carefully covering part of the conjunctiva. Then a daily rubbing of the conjunctiva with 1:500 solution of bichloride of mercury, with ordinary cleanliness, and the installation of several drops of bichloride 1:5000 t.i.d.

At all times the patient should be under the most perfect hygienic conditions possible. Treat them just as you would a tubercular

patient—good food, fresh air, etc. In this way we get a so-called cure in the majority of cases, in from three to six weeks. These cases, lots of them, come back. I have frequently operated on cases that have been once cured, and not infrequently upon cases that have been cured more than once. It is not due, in these cases, to improper treatment, neither medicinal nor operative, but to the inherent chronicity of the disease process. Our treatment of trachoma should therefore be directed to the prevention of the infection.

Trachoma is not very infectious. People live together for years with infected individuals, without themselves showing any signs of infection. These infected people should sleep alone, have separate bathing facilities, and utensils of this character. A disease so feebly infectious should be stamped out, and it is being stamped out in the cities in which proper inspection is maintained. That trachoma is curable, is to my mind extremely doubtful, especially if it has existed for some time. We cannot cure the disease, but we can greatly lessen the discomfort of these patients, prevent the development of complications, and by insisting on proper hygienic measures, prevent the spread of this disease.

PNEUMONIA.*

By Sam T. Brunley, M.D.,
Ottway, Tenn.

In this paper an attempt is made to outline the symptoms, diagnosis and treatment of croupous pneumonia sufficiently to elicit a full discussion.

This is a disease that is of a great deal of interest to the medical profession, and especially is it interesting at this time of the year, when the predisposing causes, such as cold, debilitating diseases, etc., prepare the system for the invasion of the specific germ. Our modern medicine teaches us to observe two specific organisms—termed pneumococcus and diplococcus—as to the infectious nature of this disease. Thus, from these causes pneumonia may be a local disease, producing

*Read before the Greene County Medical Society, January 6, 1913.

constitutional symptoms, or it may be a general disease with a local expression in the lungs; and while the toxicity of the disease varies more or less with the extent of lung involved, it does not always depend upon such involvement, but may depend upon the resistance of the patient and upon the virulence of the organism.

The symptoms of pneumonia are very distinctive, which at the onset are: Headache, chill, high fever, pain, cough and sometimes vomiting. The severity of the onset is by no means a positive indication of the severity of the course the disease will run.

While the diagnosis of a typical case of pneumonia is, as a rule, easy, an inexcusable error is sometimes made on account of the modifications in the symptoms, and while we may suspect pneumonia, positive physical signs cannot be made out for 48 hours or longer after the onset. For the sake of rendering good or bad prognosis, a differential diagnosis of pneumonia from pleurisy or from acute tuberculo-pneumonia phthisis becomes of importance. There may be a very close resemblance, both in the symptoms and physical signs, and sometimes it is impossible to determine without a microscopical examination of the sputum be made.

Treatment: Personally, I regard this disease as a self-limited one, and the conclusion from my observation is that I have never been able to abort a genuine case of pneumonia. Though I am well aware that many others from their experiences have drawn conclusions which are contrary, namely, that they have, by amending the Golden Rule to read: "Do unto others as you would have others to do unto you," and "do it quickly," succeeded in aborting some cases. This conclusion is apparently justified. Still our knowledge of aborting pneumonia is imperfect, although we do know that suitable treatment given promptly, and at suitable times, will diminish the fury of the disease and lessen the suffering of the patient, if not hasten the crisis.

As to the treatment of pneumonia, I shall not be able to produce any new theory, but shall discuss a few of the common and important methods.

Regarding this disease a self-limited one, the treatment may be classed as supportive

and eliminative. At the onset, if there is much pain, $\frac{1}{4}$ gr. or morphine sulphate may be given and continued in doses of 1-16 to 1-6 every two hours. If the case is mild, the pain may be relieved by turpentine stupes.

Strychnine, 1-30 gr., is a good heart tonic, and may be given every 3 to 4 or 6 hours, combined with 3 to 5 grs. Quinine Sulphate. Constipation should be watched for, and, if present, a dose of magnesium sulphate occasionally given. If the case is very severe and toxic, a physiological saline solution to lavage the bowels is highly recommended. A blister in pneumonia sometimes is good—to be used toward the end of the disease, when convalescence does not set in, or there is delayed resolution.

The subordinate, though important, measures belonging to the treatment of croupous pneumonia, such as rest, fresh air and hygiene, should be carried along with our modern scientific drug therapeutics.

Stimulation is begun as the condition or symptoms of the case indicate. As a rule this is not necessary the first three or four days. In severe cases the heart and pulse must be carefully watched and the stimulants varied as the disease progresses and the lungs become engorged. I have endeavored to present to you a few general suggestions which I hope will cause you to reflect upon this dangerous disease a moment.

THE BACTERIOLOGICAL BALL.

A gay Bacillus, to gain him glory,
Once gave a ball in a laboratory.
The fete took place on a cover-glass,
Where vulgar germs could not harrass.
None but the cultured were invited,
(For microbe cliques are well united),
And tightly closed were the ball room doors,
To all the germs containing spores.

The Staphylococci first arrived—
To stand in groups they all contrived;
The Streptococci took great pains
To seat themselves in graceful chains.
While somewhat late, and two by two,
The Diplococci came in view.
The Pneumococci, stern and haughty,
Declared the Gonococci naughty,
And would not care to stay at all
If they were present at the ball.

The ball began, and mirth ran high
With not one thought of danger nigh.
Each germ enjoyed himself that night
With never a fear of the Phagocyte.
'Twas getting late, and some were "loaded"
When suddenly a jar of Formalin exploded,
And drenched the happy dancing mass
That swarmed the fatal cover-glass.

Not one survived, but perished all
At this Bacteriological Ball.

PRELIMINARY PROGRAM

1. Inflammatory Stricture of Oesophagus.....Richmond McKinney, M.D., Memphis
2. The Drug Habit in Tennessee, From the Viewpoint of an Enforcing OfficialLucius P. Brown, M.D., Nashville
3. The Cancer Problem.....Joseph C. Bloodgood, M.D., Baltimore, Md.
4. Arterio Sclerosis of the Cerebral Vessels.....John Phillips, M.D., Cleveland, O.
5. Demonstration of the Recently Discovered Micro-Organism of Hodgkin's Disease. (Corynebacterium Gramulomates maligni)William Litterer, M.D., Nashville
6. Brain Abscess—Its Etiology, Diagnosis and TreatmentH. O. Reik, M.D., Baltimore, Md.
7. Chronic AppendicitisR. A. Barr, M.D., Nashville
8. The Runabout BabyW. N. Lackey, M.D., Gallatin
9. Bone Transplantation with Report of Case.....E. T. Newell, M.D., Chattanooga
10. The Factors Necessary to Make Correct Surgical Diagnoses. Some Clinical Cases IllustrativeE. D. Newell, M.D., Chattanooga
11. Gastric UlcerJ. B. Thielen, M.D., Knoxville
12. Food Intoxications of ChildhoodO. H. Hill, M.D., Knoxville
13. Report of Some Interesting Cases of Abdominal Surgery.....C. P. Fox, M.D., Greeneville
14. Tonsilectomy Versus TonsilotomyC. B. Jones, M.D., Knoxville
15. When Should Gastric Ulcer Be Treated Surgically, and When Medically?Bertram W. Sippey, M.D., Chicago
16. Gall Bladder DiseasesJ. Hugh Carter, M.D., Memphis
17. Pudendal HematoceleJ. M. Clack, M.D., Rockwood
18. Means of Resuscitation in Anaesthetic Fatalities....E. M. Sanders, M.D., Nashville
19. Placenta PreviaJ. S. Campbell, M.D., Gordonsville
20. Treatment of the Several Stages of Trachoma.....G. C. Savage, M.D., Nashville
21. Elliott Trephine Operation for Glaucoma.....Hilliard Wood, M.D., Nashville
22. Abortion, With Report of Case.....S. B. Duggan, M.D., Eagleville
23. PneumoniaD. A. Walker, M.D., Friendship
24. The Present Status of Blood Pressure.....F. A. Jones, M.D., Memphis
25. SterilizationS. M. Miller, M.D., Knoxville
26. Cancer of the BreastC. Holtzclaw, M.D., Chattanooga
27. The Significance and Mismanagement of Acute Abdominal PainL. Sheddian, M.D., Knoxville
28. The Serum Diagnosis of Gonorrheal Infections. (From the Laboratories of the Board of Health)R. L. Jones, M.D., I. Simons, M.D., Nashville
29. The Necessity of the Wassermann Reaction in Controlling the Treatment of SyphilisHerman Spitz, M.D., Nashville
30. Some Suggestions for a Change in the State Law Governing Expert TestimonyS. T. Rucker, M.D., Memphis
31. The Use of Hyoscin—Morphine and Novacaine As Anaesthetics in Certain Selected Surgical Cases.....J. A. Crisler, M.D., E. J. Johnson, M.D., Memphis
32. Treatment of Ameobic Dysentery.....O. N. Bryan, M.D., Nashville
33. Treatment of Surgical TuberculosisW. A. Bryan, M.D., Nashville

THE JOURNAL

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EDITORIALS**SELF TEACHING.**

It is neither convenient nor possible for every practitioner to make pilgrimages to medical centers for purposes of instruction, however desirable such a habit may be. Many must forego the pleasure and the profit of sitting at the feet of the Masters in Medicine. Such physicians, however, are not without resources in keeping themselves abreast of the times. Some of us received our medical education at a time when clinical instruction was unsatisfactorily done and bedside instruction almost unknown. We failed to be drilled in that best of all aids—text to knowledge—method. What examinations we saw were not so thorough as they should have been, and some of us may not yet have acquired a system of methodical examinations of patients which is so necessary to diagnosis. In the absence of a native habit of thoroughness there are certain aids that we can make use of that will train us to examine our patients with greater care. One of the best is a system of keeping records of cases. To make a record of a case in itself suggests a more careful search for symptoms and physical signs, for one hardly feels like making a record that contains only a few items. To read over one's own records often suggests that at the time made the record should have been more full. Records of physical examinations should specifically detail the positive findings and in many cases the negative findings as well. Furthermore, putting down one's findings in black and white for future reference or for verification by some other physician leads to greater care in making the examination.

Another help to methodical work is reading case reports and of this kind of reading there is nothing quite so good as Cabot's Differential Diagnosis. The reader has placed con-

stantly before him methods of examination, and what is very helpful, suggestions as to laboratory tests. The most thorough physicians are, in the long run, the most successful diagnosticians, for there is no royal road to the clearing up of difficulties.

The writer lays no claim to special thoroughness of examination or skill in diagnosis, but his own experience has taught him the value of the above suggestions in overcoming to a degree a natural tendency to easy-going methods, and he strongly urges their adoption upon the younger generation of physicians.

STATE SECRETARIES' MEETING.

The meeting of State Secretaries held in Chicago, under the auspices of the American Medical Association, on February 25th, was well attended, and representatives of nearly every State Society were there. While it is true that New York and Texas did most of the talking, we should not forget that Townsend represented a very large State in population, and Taylor an equally large one in area. In spite of these drawbacks, the meeting proved profitable to all in attendance, and will bring much good to those societies whose secretaries are active enough to adopt suggestions which were made, and to put in practice the many helpful hints relative to the improvement of conditions in state societies.

Many topics came up for discussion, but the idea of establishing some definite plan for the uniform transfer of members from one State to another occupied too large a share of a one day's meeting. The general feeling was that it was impractical and could not be accomplished at the present time, the Southern delegates being almost unanimous against it, on account of the race question.

The suggestion, afterwards made into a motion, by Dr. Townsend of New York, that the Board of Trustees be requested to consider the advisability of paying the expenses of the House of Delegates, was carried by an overwhelming vote, though we confess to being opposed to the plan, for the reason that the American Medical Association does not profit by the members of county or state societies and gives membership and representation free of charge. If each state society

contributed directly to the maintenance of the A. M. A., then it would probably be within the province of these societies to ask the central body to defray the expenses of the delegates. The matter will, no doubt, be taken up by the Board of Trustees, but we venture to offer an unfavorable prognosis.

The many phases of work which would offer more to the members of the State societies, and induce larger numbers to join, were discussed briefly, but we had hoped to learn more of the progress which was being made in the several States represented.

On the whole much valuable information was obtained, and the good to result from the meeting will in time be felt by every member of our society.

News Notes and Comment

A baby boy was born to Dr. and Mrs. R. E. Fort on the 14th day of February.

Dr. and Mrs. B. S. Galbraith of Hendersonville, Tenn., have a new baby son.

Dr. W. C. Young, a prominent physician of Clifty, Tenn., has recently been in Nashville.

Dr. W. M. Orr, a member of the Bedford County Medical Society, lost his wife, after a lingering illness, in January.

Drs. W. D. Haggard, J. A. Witherspoon, and L. E. Burch went to Chicago, February 23rd, to attend a meeting of the A. M. A. on Medical Education.

Dr. Perry Bromberg made a short trip to Chicago the latter part of February to attend the meeting of the American Medical Association for Secretaries of State Societies.

Announcements have been received from Mr. and Mrs. Rudolph Howard of Cleveland, Ohio, of the marriage of their daughter, Fannie, to Dr. Julius M. Rogoff, of Nashville, Tuesday, the 22nd of February, in Cleveland, Ohio.

Dr. Nathan S. Marshall, one of the few survivors of the fleet which Commodore Perry opened the doors of Japan with in 1854, died February 8th, at Lincoln Park, a suburb of Knoxville, at the home of his daughter, Mrs. S. C. Hutchison. Dr. Marshall was nearly 82 years of age. He was born in 1832 at West Christer, Pa. He was assistant surgeon on the gunboat Vandalia of Perry's fleet. After that cruise he retired from the navy and located at Olney, Ill., where he lived until thirteen years ago, when he came to Knoxville to make his home with his daughter. He leaves four daughters and one son.

Dr. T. O. Burger of McMinnville, Tenn., has sold his infirmary to Drs. Northeutt and Bales, the latter from Morristown, Tenn., and is moving to San Diego, Cal., and will take up his practice there. We wish the doctor much success in his new field of practice.

A stubborn fire, which broke out shortly after 8 o'clock February 7th, in the basement of the residence of Dr. John A. Witherspoon, created a good deal of excitement in the fashionable section of West End, and resulted in the loss of property valued at about \$5,000, covered by insurance. The work of the firemen was seriously retarded by a dense, choking smoke which enveloped the entire residence and extended out for some distance on West End Avenue. At the time that the flames were discovered, Mrs. Witherspoon, Miss Louise Witherspoon and John, Jr., were engaged in a game of perchesa in the living room. Smoke was smelled, and on opening a door the whole rear of the house was in a light blaze. The alarm was given and neighbors rushed over to render any possible assistance. Engine No. 7 on West Broad was notified and was soon on the scene. Dr. John A. Witherspoon, at the time the fire broke out, was attending a banquet at the Bismarek, given by the Witherspoon Club of Vanderbilt, of which he was the honor guest. When he arrived on the scene he showed great fearlessness in the face of the smoke and flames and assisted Chief Rozetta in handling a troublesome situation.

DEATHS.

Dr. Miles Scott died February 12th at his home near Springfield, Tenn., of heart trouble. He was one of the most prominent citizens of his community. He is survived by his widow, two sisters and a brother, Dr. Winfield Scott, of Pleasant View.

Dr. John Wilson died at his home at Burleson, Tennessee, Tuesday, February 12th. He was one of Tipton County's leading physicians, and the son of W. B. Wilson. He leaves a wife and several children.

Dr. M. S. Neely died at his home in Jackson, Tenn., Friday, Feb. 14th, after a protracted illness. Dr. Neely was one of the best known and most respected citizens of Jackson. He had lived there many years, practicing his profession, in which he was most successful. Dr. Neely was 81 years old, and is survived by his daughter, Mrs. M. F. Murdock. He was a ruling elder in the First Presbyterian Church, an Odd Fellow, and a Confederate Veteran.

County Society Proceedings

DAVIDSON COUNTY.

December 16th.—President West called the Academy to order at 8:10 p. m. Among those present were: Black, Larkin Smith, Neil, Billington, Jack Witherspoon, Pickens, Hugh Barr, Ward, Aycock, DeWitt, Bloomstein, Fuqua, Tarpley, Oughterson, Schell, McCabe, Nichol, Shoulders, Witt, Glasgow, Howard King, Melvain, Glasgow, Crawford, Floyd, Weaver, Duncan Eve, Jr., Edwards, Hill, Morrissey, Litterer, C. F. Anderson, Hibbett, Owsley, Price, Overton, Pollard, Kennon, Harrington, Cayce, Simons, Manier, McGannon, and visitors.

The essay of the evening was by Dr. Fuqua on "The Diagnosis of Early Pulmonary Tuberculosis." Dr. O. N. Bryan was to open the discussion, but was absent.

The subject was then declared open for general discussion. Dr. Witt said that Osler has been quoted as saying that in diagnosing early tuberculosis, the history is of more value than the physical examination. At first Dr. Witt doubted this, but since he has paid more attention to this phase of the problem, he is inclined to believe the truth of it. It is his belief that the lack of a diagnosis in the mod-

erately difficult cases is due to laxness in examination and history-taking by the physician. Persistent, localized rales is one of the best signs of early tuberculosis. These sounds are found in many other conditions, but their persistence in a localized spot is very strong evidence. Puerile, rough or interrupted (cog-wheel) breathing is not of much value, Dr. Witt thinks. Slight differences in breath sounds, percussion notes and voice sounds on the two sides are so often different in the posterior upper lobes normally, that many cases are condemned when they are normal. He quoted a case illustrating the difficulty in diagnosis.

Dr. Oughterson said that he thinks it rare that a diagnosis of incipient tuberculosis is made by physical signs. Believes that the history is of greater value, but does not mean to leave the impression that a thorough physical examination should not be made. Thinks cog-wheel respiration of little value; also, that the differences normally in the two sides is very confusing and that the exaggerated type of breathing in the right apex is often misinterpreted. He thinks the negative findings in the sputum should not deter us from making a positive diagnosis. He believes that the chronic bronchitis of elderly people to be tuberculosis more often than we formerly believed.

Dr. Litterer, speaking to the point of laboratory diagnosis, said that Von Pirquet applied his test originally to children, since adults reacted irregularly and other investigators applied this test to adults. Dr. Litterer has found that cases reacted which had absolutely no tuberculosis. He uses it now only in very young children. The negative finds of this test cannot be absolutely relied upon, as is evidenced by the fact that in two cases of kidney tuberculosis (confirmed by operation) no reaction was obtained. Dr. Litterer stated that the Calmette reaction is coming back into vogue, especially by Larensen Brown. When this test is properly applied it should give no bad results. A very low dilution should be placed in the eye at first. The sub-cutaneous method of using tuberculin is the most valuable test, and that the rise in temperature is the best single sign resulting from the injection. The tuberculin should be given in three doses, first, .1 mg., then 1 or 2 mg., and later 7 mg. The injections should be given three or four days apart. If no reaction occurs from these injections, it can safely be said that the patient hasn't tuberculosis, though there are exceptions even to this. In regard to the sputum, the anti-formin method of concentrating the bacilli in the sputum should be used when they are not found by the ordinary method.

Dr. Jack Witherspoon asked if the Calmette reaction will be positive in healed lesions.

Dr. Cayce advocated the examination of the larynx in early cases, saying that in 60 per cent of cases changes are observed in the larynx. He stated, also, that phlyctenular conjunctivitis in children should be regarded as suspicious of tuberculosis.

Dr. Bloomstein quoted Hamburg of Vienna as saying that the Von Pirquet reaction is of value in children under three months of age.

Dr. Fuqua, in closing, said that the Von Pirquet reaction was the most delicate test, but the least valuable; and that rales was the most valuable physical sign. He stressed the point of prolonged observation of suspicious cases with repeated examinations.

Case Reports. Dr. Neil reported a case of perforated duodenal ulcer diagnosed with difficulty at operation.

Dr. Witt reported a case of a typical typhoid in a woman of 35 years, who had typhoid fifteen years previously. The malaria plasmodium was said to have been found in her blood, but was not confirmed by others. The Widal was positive.

Dr. Shoulders quoted Bass of New Orleans to the effect that every patient suffering from an acute disease with the malarial parasites in the blood was not suffering from malaria.

Dr. Kennon asked if the positive Widal might not be the result of the early attack of typhoid.

Dr. Witt said that 2 per cent of typhoid resulted in "carriers," and that if his case was not a carrier, the agglutination effect of the blood is lost in the period of time that had elapsed since this patient's first attack.

Dr. Neil reported a case of a typical typhoid following delivery.

Dr. Simons described a new method of giving salvarsan intravenously in concentrated solution. Adjourned 9:55 p. m.

December 23.—The Academy was called to order at 8:15 p. m., with the President, Dr. Olin West, in the chair. Those present were Savage, Shoulders, Sullivan, Kennon, McIlvain, L. Caldwell, Jones, R. Caldwell, McCabe, Tigert, Billington, Williamson, D. Eve, Jr., Howard King, Fuqua, Hill, Manier, Weaver, Litterer, Burch, Jack Witherspoon and Eggstein.

The paper of the evening was by Dr. H. H. Shoulders on "The Prevention of Malaria."

Dr. R. L. Jones opened the discussion. He stated that it is estimated that malaria costs the South \$25,000,000 annually in crippling workers and that this disease has not had the attention from health officers that it deserves.

The eradication of the gamete forms is the kernel of the subject, but most patients are not seen until the gamete stage is reached, i. e. within fourteen days. He said that the chill tonics, which contain a small amount of quinine and arsenic, are potent causes of the prevalence of malaria because the small quantities do not entirely kill all the parasites and their various forms. Another factor in the prevalence of malaria was the breeding places often overlooked, as little ponds of water, tin cups containing a small amount of water, especially when sheltered from the sun, etc.

Dr. Kennon asked for Dr. Bass' method of treatment with quinine referred to in the essayist's paper.

Dr. Tigert asked Dr. Savage to speak regarding quinine amblyopia, and if he could give any guide as to the dosage in regard to this.

Dr. Savage, replying to Dr. Tigert, said that he did not remember the number of grams per kilo of body weight necessary to cause amblyopia. The cases seen by Dr. Savage were caused by doses of quinine all out of reason. Thirty grains a day need give no fear of causing this. One case was given one ounce in twenty-four hours. This was given by a doctor in the earnest desire to prevent the "third congestive chill," which was said to be fatal.

Dr. Lindsley, of Mobile and Havana, was invited to speak. He advocated the screening of houses as the most potent factor in the prevention of malaria; also, the immediate destruction of the pests that enter the house.

Dr. Shoulders (closing) said that every town and every house is a malarial problem in itself, but general principles must be applied to all. He agreed with Dr. Jones that the chill tonics containing a small amount of quinine are great factors in the propagation of the disease. In regard to Bass' treatment, the latter gives thirty grains of quinine a day for three weeks; then thirty grains two days a week for six consecutive weeks.

Case Reports. Dr. Duncan Eve, Jr., reported a man of 67 who sustained a fracture of the femur at the lower third, which was treated in Hodgen's splint for four weeks with perfect apposition but no union. At the time of fracture he was under treatment for an enlargement just above the knee. At the time of fracture the patient fell, but the fractured limb did not touch the floor. Dr. Eve made a diagnosis as spontaneous fracture due to malignant growth, which was confirmed by X-ray. Amputation of the leg was done at the upper third of the thigh. A hip-joint amputation was not done on account of the poor general condition of the patient.

Dr. Gallagher congratulated Dr. Eve on his

diagnosis, and stated that this case emphasized the importance of getting a careful history in all fracture cases. In Dr. Eve's case the fracture preceded the fall, instead of the fall preceding the fracture, thus proving almost conclusively that the fracture was due to some condition weakening the structure of the bone. The conditions causing this latter condition are either sarcoma or carcinoma, spontaneous fracture rarely resulting from tuberculosis.

Dr. Billington also believes that tuberculosis rarely affects the shafts of long bones, and hence fractures due to this condition should not be considered.

Dr. Howard King thinks that recurrence is likely to occur in Dr. Eve's case early, since sarcoma metastasizes through the blood vessels.

Dr. Litterer said that he had not examined the growth as yet microscopically, but that the macroscopic appearance was indicative of sarcoma. He stated that if this growth was of the giant-celled type, the prognosis was good. He reported, apropos of spontaneous fractures, a spindle and giant-celled sarcoma occurring at the site of fracture in the humerus. He stated that this was very rare, and he was constrained to believe that the sarcoma was present before fracture.

Dr. Robert Caldwell stated that it was rare to have a malignant growth engrafted on a bone at the seat of fracture.

Dr. Billington suggested that Dr. Eve's case may be due to a bone cyst. The Academy adjourned at 9:20 p. m.

December 30th.—The regular meeting of the Academy was called to order by the President, Dr. Olin West, at 8:15 p. m., with the following present: Toy, Simons, Sharber, Leonard, J. M. King, Hill, Davis, Preston, Floyd, Jack Witherspoon, Oval Bryan, Shoulders, Ward, Williamson, Aycock, Melvain, Hugh Barr, Brower, Keller, Bloomstein, Witt, Lucian Caldwell, Harris, Tarpley, Handley, McCabe, Billington, Owsley, Duncan Eve, Jr., Edwards, Howard King, Pickens, Dixon, Eggstein, Glasgow, Cayce, Sanders, Tigert, Litterer, Grizzard, Pollard, Simmons, Robert Caldwell and Manier.

The reading of the minutes was passed.

The paper of the evening was by Dr. Perry Bromberg on "The Treatment of Syphilis."

Dr. Frank Glenn was to open the discussion, but was absent.

Dr. Handley stated that Dr. Bromberg had expressed his views in regard to the treatment of this disease. He arose to emphasize the importance of early diagnosis and early application of treatment. These cases diagnosed early are more amenable to treatment.

He advocated repeated doses of salvarsan at short intervals—a week or ten days—preferring salvarsan to neo-salvarsan. He stated that in 60 per cent of his cases he had no reaction following its administration. He also endorsed the essayist's attitude in regard to the value of inunctions. He gives a drachm and one-half of the mercurial ointment to be rubbed in for six nights, then an interval, when it is repeated. In regard to the excision of the chancre, this has the objection of the presence of mixed infection and the bad results which might follow.

Dr. Simons discussed the dark-ground, the India ink and Giemsa methods of detecting the spirochetes. Also, the concentrated method of giving neo-salvarsan intravenously. He exhibited the tubes of a Wasserman reaction made with blood serum and the cerebro-spinal fluid.

Dr. Litterer: In regard to the excision and cauterization of the initial lesion, he agrees with the essayist that this should be done. The chancre is teeming with spirochetes, and since salvarsan reaches the chancre last, he advocates the early eradication of the supply of the infection. He stated that salvarsan had been increased in its potency recently, smaller doses, say .3 gm., equalling .5 or .6 gm. of a year ago. Neo-salvarsan should be given in larger doses, .9 gm. He urges the importance of using freshly distilled water.

Dr. Bloomstein asked Dr. Bromberg if he had any experience in the treatment of hereditary syphilis, and if he could use the same treatment as he advocated in the adult.

Dr. Howard King quoted Dr. Henly Whitehouse as preferring neo-salvarsan to the older product; also, that he uses mercury in conjunction with four or five doses of the Ehrlich-Hata product.

Dr. Sanders asked Dr. Bromberg in regard to the fatalities from the use of salvarsan.

Dr. Bromberg (closing) stated that Dr. Simons' objection to cauterization of the initial lesion had been sufficiently answered by Dr. Litterer. The speaker has had no experience with the concentrated injections of salvarsan for, according to Harrison in the British Medical Journal, the concentrated solution is not isotonic. His experience in hereditary syphilis has been very limited, though he believes that these cases should be treated on the same principle as adults, giving as large a dose as the weight and age of the patient would admit. In regard to fatalities, Dr. Bromberg has had nothing that would approach this in his experience, and quoted Harrison as having 6,000 cases with only one death.

Case Reports: Dr. Robert Caldwell presented a patient, who gave the following history: Male, age 25. Occupation, foreman in

a printing establishment. Family and personal histories negative. Complaint: A few months ago had a benign tumor removed from the bladder by canterization. Three weeks ago noticed that he tired easily when working. One week ago began to have continued aching in forearms. He has had pain in the legs, which was relieved by the application of an elastic bandage. Was first seen Christmas day, complaining as above. The next day the forearms were noticed to be oedematous, which has increased steadily since. The legs also showed some oedema. Temperature and pulse normal; urine negative. No blue line on gums. No numbness or tingling in arms.

Dr. Harris saw this patient several days ago with Dr. Caldwell, his examination revealing: reflexes normal, no areas of anaesthesia, and apparently no loss of power. Pulse equal in both wrists. Heart and lungs negative and a negative Wasserman.

Dr. Dixon said that the sudden appearance of the swelling would suggest the urticaria group of diseases, though there is no history of any eruption. Thinks the examination of the blood for stippled cells would help to clear the diagnosis.

Dr. Witt said that he had seen a half dozen of similar cases and has classed them in the urticarial group. The line of demarcation between the different phases of this group is not marked, said the speaker. Thinks this patient will get well, but believes that it will recur possibly in another form.

Osler classes these cases as the exudative erythema.

Dr. J. M. King does not believe this case of the erythema or urticaria group, but thinks that on account of the loss of power he detected to indicate nerve involvement. The generalization would exclude angioneurotic oedema.

Dr. McCabe thinks it possibly peliosis rheumatica, though this case is not typical of that disease. Does not think it toxic.

Dr. Dixon related similar cases of the erythema groups which have come under his observation. The Academy adjourned at 10:15 p. m.

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January 6th.—The meeting of the Academy was called to order by the Vice President, Dr. Duncan Eve, Jr., at 8:30 p. m., with almost the entire membership of the Academy present. According to the new Constitution

and By-Laws, this was the annual meeting of the Academy, the date having been changed from the first Tuesday in April.

The following report was submitted by the Secretary-Treasurer: "To the President and members of the Nashville Academy of Medicine: As Secretary-Treasurer of the Nashville Academy of Medicine and Davidson County Medical Society, I beg leave to present you the following report. The roll of the Academy shows that, for the year 1913, there were 155 members in good standing. During this time seven members have withdrawn, all on account of removal to other parts of the country or to other counties of the State. There were 22 applications for membership, all of which were acted upon favorably. Two of the applications were in the nature of transfers from other counties of the State. Of the twenty regular applications only thirteen complied with all the regulations of the Academy requisite for membership. The total new members in the Academy for the past year, therefore, is fifteen. There is one honorary member. The total receipts of the Academy for the past year as shown by the appended itemized report was \$945.08. The total expenditures as per the attached itemized statement was \$526.76. Thus there is a balance on hand of \$419.32. To this is to be added \$10.98 interest which has accrued on the bank deposit, making a grand total of \$430.30. This amount is to my credit as Secretary in the Tennessee Bank & Trust Co., as shown by the accompanying bank book." (Signed) J. F. Gallagher, Secy.-Treas."

It was moved and seconded that the report of the Secretary-Treasurer be received and filed.

The chair announced that the next order of business was the election of officers for the ensuing year, and that nominations for President would be entertained. The Secretary reminded the Academy that the new Constitution provided that at least two members must be nominated for each office.

Dr. Deering J. Roberts placed the name of Dr. Duncan Eve, Jr., in nomination for President. Dr. R. L. Jones nominated Dr. W. E. Hibbett for the same office. It was moved, seconded and carried that the nomination be closed. Ballot was then called for, which re-

sulted in Dr. Duncan Eve, Jr., receiving 38 votes, and Dr. W. E. Hibbett receiving 27. Dr. Eve was declared elected.

In the call for nominations for Vice President, Dr. Robert Caldwell nominated Dr. C. N. Cowden; Dr. C. C. Sullivan nominated Dr. A. L. Sharber; Dr. J. D. Goodwin nominated Dr. A. G. Nichol; Dr. W. M. McCabe nominated Dr. W. E. Hibbett. It was moved, seconded and carried that the nominations be closed. The vote resulted as follows: Sharber, 12; Cowden, 28; Hibbett, 27; Nichol, 7.

Dr. J. A. Witherspoon moved (seconded by Dr. Duncan Eve, Sr.) that the two candidates receiving the least number of votes be dropped. Carried.

On the next ballot, Dr. W. E. Hibbett received 41 votes and Dr. Cowden 34, and Dr. Hibbett was declared elected.

Nominations for Secretary-Treasurer were called for. Dr. Irvin Simons nominated Dr. R. L. Jones. Dr. R. A. Harrington nominated Dr. J. F. Gallagher. The vote resulted in Dr. Jones receiving 19 votes and Dr. Gallagher 57. Dr. Gallagher was declared elected.

The Secretary stated that in view of the increased membership of the Academy, this society was entitled to another delegate to the State Society. Thereupon the President called for nominations for this office. Dr. W. M. McCabe nominated Dr. W. C. Dixon; Dr. J. D. Goodwin nominated Dr. C. F. Anderson; Dr. D. R. Neil nominated Dr. R. O. Tucker. There being no other nominations, the vote was taken, which resulted in Dr. Dixon receiving 51, Dr. Anderson 12, and Dr. Tucker 22. Dr. Dixon was declared elected. As alternate to Dr. Dixon, Dr. R. E. Fort nominated Dr. C. F. Anderson and Dr. C. C. Sullivan nominated Dr. Paul DeWitt. On vote, Dr. Anderson received 37 and Dr. DeWitt 30. Dr. Anderson was declared elected.

By invitation of the Academy, Dr. Isidore Cohn of Tulane University, New Orleans, was present and delivered an address on "Bone Regeneration." The paper dealt with the author's researches on bone regeneration, which lead him to the conclusion that neither periosteum or contact with living bone was necessary for bone to regenerate. He exhibited microscopic slides to substantiate his contention.

The President thanked Dr. Cohn on behalf of the Academy for his address.

Dr. W. A. Bryan stated that the Academy was under deep obligations to Dr. Cohn for his admirable address. He said that we have been too prone to take things for granted because some one in authority says it is so, and commended Dr. Cohn on his bone work, which, it seemed, controverted certain statements of great authorities. Dr. Bryan related a case in which a tibial transplant grew and which had no contact with living bone.

Dr. Robert Caldwell expressed his appreciation of Dr. Cohn's original work. He thinks we have not found the solution of this problem of bone regeneration, and referred to Drs. Brown of El Paso as having diametrically opposite views in this regard as those held by Dr. Cohn. Dr. Caldwell gave his views of cell life and cell nourishment and their application to bone regeneration.

Dr. Billington said, after thanking Dr. Cohn for his paper, that he thinks it immaterial how much of the transplant lives or how much dies. He quoted McEwen's experiments and stated he was inclined to accept the stand taken by McEwen and Cohn as being the correct one.

Dr. Spitz discussed the histology of bone and bone development.

Dr. Price discussed bone transplantation and the similarity of this and that of the grafting of plants.

Dr. Cohn (closing) stated that he was carrying out experiments on the repair of fractures, a report of which he would publish shortly.

The Academy then adjourned to the dining room of the Tulane Hotel, where the annual dinner was partaken of. Dr. J. A. Witherspoon acted as toastmaster, and toasts were responded to by Dr. Isadore Cohn of New Orleans, Drs. R. A. Barr, W. A. Oughterson, E. L. Jones, C. N. Cowden and O. N. Bryan of Nashville.

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January 13th.—The regular meeting of the Academy was called to order by the President, Dr. Duncan Eve, Jr., at 8:12 p. m. with the following members present: Sharp, Owsley, Litterer, Cayce, Keller, C. F. Anderson, Roberts, Jack Witherspoon, Hill, Padgett,

Sanders, Cowden, Toy, B. G. Tucker, Watkins, Bromberg, Shoulders, West, Pollard, L. Caldwell, West, DeWitt, R. Caldwell, Eggestein, Fort, Lanier, H. King, Edwards, Fuqua, Williamson, Kennon, Billington, Preston, Hibbett, McCabe, Briggs, Melvain, Floyd, Handley, Jones, Pickens, and visitors.

The Secretary read a communication from Dr. McCulloch inviting the Academy to a public health meeting that evening.

Dr. McCabe moved, seconded by Dr. R. Caldwell, that the Secretary be instructed to write Dr. McCulloch accepting the invitation and thanking him for same. Carried.

The paper of the evening was by Dr. C. F. Anderson on "Circumcision."

Dr. Handley opened the discussion. He said that he used the old method of circumcision and that he preferred the torsion of vessels to ligature in arresting hemorrhage. He uses a continuous suture in uniting the two surfaces. He avoids cutting the fraenum when possible.

Dr. Sanders said that it was well to bring this subject before the Academy, because he has seen some of the best surgeons do a bungling circumcision. He thinks that the first dressing should be removed in the first twenty-four hours. This gives more comfort.

Dr. McCabe said that he has been using the operation described by the essayist for nine years and thinks it an ideal operation. The general error, he thinks, is placing the sutures too tight. He does not do a dorsal incision any more, but does a circumcision and uses an argyrol dressing.

Dr. Cowden disagreed with the essayist in regard to hemorrhage, as he has had two serious hemorrhages following this operation. He always ties the two vessels on each side of the fraenum. He prefers to change the first dressing early.

Dr. Pollard said that he was not familiar with the operation described by the essayist, being content with the results of the old method. However, he thinks it ideal in selected cases.

Dr. Duncan Eve, Jr., stated that he preferred the "clock dressing." This was described by the speaker and illustrated with blackboard drawings.

Dr. Anderson (closing) said that he claimed

nothing original in the operation described as he got his ideas from an article by Keyes in the Journal of the American Medical Association some years ago. He has not seen, however, a description of leaving the mucous membrane of the fraenum longer than that on the dorsum. In regard to the dressing, he thinks the one described by himself would not be best for operation as usually done, but thinks it well adapted to the operation he uses.

Case Reports. Dr. G. P. Edwards asked the privilege of the floor, which was granted, and presented a man, aged 50, who was seen first in March, 1913, with a large epithelioma of the lower lip. An application of 100 mg.-hours of radium was made. The patient came back in May showing improvement. Sixty mg.-hours was then applied, which was repeated in July. Ten mg.-hours was applied in September, and the place has remained well since.

Dr. Barr asked if there were any palpable lymph nodes present at the time the patient was first seen.

Dr. Howard King asked if a microscopic examination had been made of the growth.

Dr. Edwards replied in the negative to both questions, and in reply to a question of Dr. Pollard, said the growth was present for two and one-half years before he was first seen.

Dr. Gallagher stated that the points hinted at by Drs. King and Barr in their questions have an important bearing on the case: first, to know definitely whether the case was epithelioma, and, second, if metastasis had formed. Since this growth had been present for two and one-half years, if it was epithelioma it was rather strange that there was not some glandular involvement since this type of neoplasm metastasizes through the lymphatics. He stated that it had been shown by the workers with radium that the ratio of cell destruction by the rays on the malignant cells and the normal cells varied in different parts of the body, e. g. in the uterus the ratio was about twenty to one, whereas on the lower lip it was said to be about equal. In view of these facts the speaker thought Dr. Edwards' case rather remarkable.

Dr. Howard King said he thinks the case, if epithelioma, is nothing short of marvelous,

especially in view of the small amount of radium used.

Dr. Cowden said that since he heard Drs. Kronig and Kelly in Chicago some time since, he believes the cure of carcinoma and sarcoma is at hand. He stated that Wertheim had published his intention of never doing another operation which bears his name for cancer of the uterus on account of the introduction of radium.

Dr. R. A. Barr does not agree with Dr. Cowden that radium is an absolute cure, but believes that it is of undoubted value in some cases. He stated that the great majority of cancer cases are uninfluenced, though some of the results are remarkable.

Dr. Edwards spoke further on the clinical symptoms of epithelioma that were present in his patient.

The President spoke of the program of essays for the coming year and urged the members to notify the Secretary the subject they desired to write on.

Dr. R. A. Barr asked what had become of the abstract committee.

Dr. Gallagher explained the status of the abstract matter.

Dr. West moved, seconded by Dr. Fort, that the President appoint a committee of five to draft additional plans to institute the abstract plan. Carried, and the chair appointed Drs. McCabe, R. A. Barr, Witt, Kennon and Larkin Smith. Adjournment was taken.

J. F. GALLAGHER, M.D., Secretary.

BEDFORD COUNTY.

Bedford County Medical Society met in regular session on Dec. 18, 1913, with the following members present: Drs. Orr, Ray, Shelton, Coble, Sharp, Patton, Woods, Moody, S. S. Reagor. Dr. Ray reported a case of acute mania cured by hysterectomy. Dr. Coble reported a case of puerperal eclampsia cured by premature delivery. Dr. Sharp reported case of cerebral compression coming on forty-eight hours after receiving blow on head from heavy stick of timber. Dr. T. H. Woods, the retiring President, delivered the annual address, the subject of which was "Quacks, Nostrum Vendors, Etc." This being our regular time for election of officers,

Dr. E. W. Patton was elected President for the year 1914; Dr. S. S. Moody was elected Vice President; Dr. F. B. Reagor was re-elected Secretary and Treasurer. Dr. R. E. Shelton was elected censor for the next three years, making our present Board of Censors: Dr. R. E. Shelton for three years, Dr. J. K. Freeman two years, and Dr. T. J. Coble one year. Dr. T. R. Ray was elected delegate to State Association, with Dr. T. J. Coble as alternate. Adjournment till next regular meeting.

F. B. REAGOR, Secretary.

The Bedford County Medical Society met January 15th, with the following members present: Drs. Landis, Woods, Coble, Patton and Robinson.

The Secretary being absent, Dr. Robinson was appointed by the chair as Secretary pro tem. The roll call was omitted and a paper written by Dr. Morton on the subject of "Influenza" was read to the society by Dr. Woods, Dr. Morton being absent. Paper by Dr. Coble on the subject of "Surgical Shock" was carried over to next meeting. Under case reports, Dr. Robinson reported case of compound comminuted depressed fracture of left parietal bone. Operated on by trephining and raising depression. Dr. Woods reported an unusually interesting case of a woman with some obscure circulatory disease which presented some peculiar symptoms. Dr. Coble called the attention of the society to the fact that hydrophobia can be better cared for by instructing the laity to corral any suspicious dog which had bitten any person and watch for positive symptoms of the disease, instead of killing and destroying the body of the animal. On motion the society requested the President to have such instruction from the Bedford County Society put in our county papers that our public may be benefited thereby. Society adjourned till next meeting.

W. T. ROBINSON, Secretary pro tem.

Bedford County Medical Society met in regular session Feb. 19, 1914. Called to order by President Patton, with the following members present: Drs. Taylor, Spencer, Ray, Frierson, Coble, Robinson, Freeman, Horton, G. W. Moody, Patton and Reagor. Dr. J. Howard King of Nashville was with us as an

invited guest, and read an interesting and instructive paper on the subject of "Cancer," which was discussed by all present. Dr. King brought out some very important points in regard to the early recognition of syphilis, which will, no doubt, be of lasting benefit to our membership who heard him. A rising vote of thanks was tendered Dr. King for his presence with us and the valuable paper which he gave us. Dr. King came to us well armed, in that he brought two papers with him, one on cancer and the other on epithelioma, and told us he was prepared to furnish either. So, as he was so well qualified and duly prepared, and the society was so well pleased with the first shot, Dr. King was prevailed on to shoot the other barrel at us, and we had the paper on epithelioma, which was very much enjoyed to the profit of us all. And thus we pressed Dr. King into a full afternoon's work—rode the good horse well. We were one and all delighted to have Dr. King with us.

After the Secretary read a communication from the Secretary of the State Association urging all our members to attend the coming meeting of the Tennessee Medical Association at Memphis April 7, 8 and 9, next, and asking as many as can to furnish papers, the society adjourned till next meeting.

F. B. REAGOR, M.D., Secretary.

PUTMAN COUNTY.

The Putman County Medical Society met in regular monthly session February 5th, with the following members present: Drs. L. M. Freeman of Granville, J. T. Moore, W. A. Howard, Howard Curtis of Algood, Sam Denton, Buffalo Valley, Lex Dyer, J. B. S. Martin and Claude P. Martin of Cookeville.

Dr. Howard of Algood read an excellent paper on the "Differential Diagnosis of Acute Follicular Tonsilitis and Pharyngeal Diphtheria and Treatment of Tonsilitis." This paper brought forth a very heated discussion among all present. Dr. Howard is one of the most gifted essayists of our number, and the society always profits by and appreciates a paper from him.

There being only two more regular meetings before the State Meeting at Memphis, the selection of a delegate to same was

brought up by the President, with the result that Dr. Rex Dyer was elected delegate, and Dr. L. M. Freeman, alternate.

There being no further business, the society adjourned to meet again March 5th.

C. P. MARTIN, M.D., Secretary-Treasurer.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met at the office of Drs. Bilbro and Holmes, in Murfreesboro, Wednesday afternoon, February 4th, 1914. The society was called to order by the President, Dr. E. M. Holmes. The essayists not being ready with their papers, a general discussion was indulged in on the subject of "Appendicitis." Dr. E. M. Holmes and B. N. White reported some interesting cases of appendicitis, which were discussed among the members in attendance. Those present were: Drs. E. M. Holmes, L. A. Scott, S. C. Grigg, Rufus Pitts, E. O. Jenkins and B. N. White.

RUFUS PITTS, M.D., Secretary.

WASHINGTON COUNTY.

The Johnson City and Washington County Medical Society met in its regular monthly meeting the first Thursday night in February, at the office of the Secretary. The following members were present: Drs. Dulaney, Matthews, Broyles, Kennedy, Randall, Long, Sells, Cass, West, Miller and Cox.

Minutes read and approved. Under clinical cases, Dr. Miller reported two cases of a peculiar rash in mother and child resembling measles, but not able to diagnose it as such. Several other cases of like nature were reported.

Dr. Sells reported an interesting case of "Angio Neurotic Oedema," same causing the death of the young man by constriction and oedema of the glottis. The patient had suffered with this condition at irregular intervals since childhood and has a child affected with the same condition, and I understand others of the family have suffered with the same trouble, and that the condition appears to be a family idiosyncrasy. Post-mortem in this case revealed no pathological condition. The oedema and constricted condition was not always confined to any special

part of the body; conditions easily superinduced by the slightest injury to any part of body or extremities. Dr. Matthews moved that the doctor write a paper upon this very unique case and have the same published, which was ordered by unanimous affirmative vote of the society. Dr. Randall reported a case of puerperal infection, in which under the administration of first C. C. Antistreptococic Serum only mild effect, afterwards using the mixed serum the patient responded to this treatment and recovered. Dr. Long reported a relapsing case of typhoid fever. Dr. Dulancy reported two cases in mother and child of membranous sore throat which was thought to be scarlatinous, but no eruption was present. A clinical case was presented in person of a little girl, 14 years of age, suffering from a congenital mitral valve lesion with hypertrophy and thought to be dilatation of heart.

Dr. Cass, at this juncture, read a very interesting and instructive paper upon "Surgical Diseases of the Upper Abdomen," which was ably discussed by Drs. West, Matthews, Kennedy and Long. Special stress was laid upon laboratory work and careful diagnosis to aid the surgeon in operative work by the essayist, Dr. Matthews and others. Society adjourned to meet the first Thursday night in March.

J. W. COX, M. D., Secretary.

WILLIAMSON COUNTY.

The Williamson County Medical Society met at their regular monthly meeting in December, 1913, with a large attendance present, and enjoyed a most excellent program. Dr. T. F. Oden read a splendid paper on "Arterio-Sclerosis and Increased Blood Pressure," which was fully discussed by all the members present. The following officers for 1914 were elected: Drs. D. B. Cliffe, President; Sam White, Vice President; B. T. Nolen, Treasurer, and K. O. Howlett, Secretary.

At the February, 1914, meeting, Dr. K. O. Howlett read a paper on "Primary Pernicious Anaemia," with report of case in which neosalvarsan was used. The remedy was given intramuscularly, in three-grain doses, at weekly intervals, and the reaction and after-effects

were described in the paper. no permanent benefit being noted.

A resolution, fixing a uniform price of five dollars for Old Line Life Insurance Examinations, was adopted by the society.

Dr. J. O. Shannon was appointed to present a paper at the March meeting. Dr. J. R. Miller, of Burrwood, was elected a member of the Association.

K. O. HOWLETT, M.D., Secretary.

SMITH COUNTY.

The Smith County Medical Society met in regular session February 6th, with the following members present: Drs. M. H. Alexander, J. J. Beasley, I. H. Beasley, J. S. Campbell, C. H. Donoho, B. J. High, R. E. Key, R. W. King and C. D. Robbins. The Society was called to order by the President, C. D. Robbins, at 1 o'clock p. m., and the minutes of the January meeting were read and approved. Dr. Key reported a case of "anthrax" in a man who had plucked the wool from the carcass of a sheep that had died of this malady. Dr. Donoho read an excellent essay on "Acute Indigestion," and Dr. Robbins opened the discussion; a general discussion followed. There were many practical points of interest brought out by the essayist, as well as by all who discussed the paper.

The society adjourned till the March meeting.

B. J. HIGH, M.D., Secretary.

MADISON COUNTY.

The Madison County Medical Society met in regular session Feb. 10th, with the President, Dr. Herman Hawkins, in the chair. The following members were present: Drs. Hawkins, Dancy, Williamson, Hopper, McCoy, Russell, Lusk, Henderson, Arnold, Fitts, Crook, Hamilton, Blackmon, Saunders.

Minutes of last meeting were read and approved.

Dr. S. A. Henderson reported an interesting case of albuminuria in pregnancy. Dr. P. B. Lusk read a paper on "Significance of Albuminuria in Pregnancy," which brought out a full discussion of the management and treatment of these cases.

The following program was adopted for the next six months:

Feb. 24th—Study of Diphtheria by Dr. A. B. Dancy.

March 10th—Study of Pneumonia, by Dr. A. McCoy.

March 24th—Study of Appendicitis, by Dr. J. L. Crook.

April 14th—Study of Adenoids, by Dr. F. J. O'Connor.

April 28th—Study, Dressing and Treatment of Minor Injuries, by Dr. W. Fitts.

May 12th—Study of Artificial Feeding of Infants, by Dr. H. Hawkins.

May 26th—Study of Malaria, by Dr. W. B. Russell.

June 9th—Study of Typhoid Fever, by Dr. L. L. Webb.

June 23rd—Study of Conduct of Normal Labor, by Dr. J. B. Love.

July 14th—Study of Ileo-Colitis, by Dr. J. A. Blackmon.

July 28th—Study of Anesthetics, by Dr. G. L. Williamson.

The application for membership of Dr. W. A. Collier was referred to Board of Censors.

The Madison County Medical Society met in regular session Feb. 24th, President Herman Hawkins presiding. The following members were present: Drs. Hawkins, Dancy, Ferron, Hopper, Henderson, Blackmon, Fitts, O'Connor, Russell Lusk, Collier, Saunders.

The "Study of Diphtheria" was taken up for the evening. Interesting cases were reported by Drs. Blackmon, Williamson and Hopper.

Dr. A. B. Dancy read a paper on the "Diagnosis and Treatment of Diphtheria."

Dr. A. McCoy was elected as delegate to the State Society at the next meeting in Memphis, April 7th, 8th and 9th.

Motion was made and unanimously adopted that the Madison County Medical Society go on record as endorsing the reappointment of Dr. A. McCoy by Governor Hooper as a member of the State Board of Medical Examiners.

Society adjourned.

W. G. SAUNDERS, Secretary.

REPORT OF AN INTERESTING CASE OF ELEPHANTIASIS

By J. R. Bone, M.D.,
Lebanon, Tenn

Patient: Ridley Young.

Race: Negro.

Age: 24 years. Single. Residence, Lebanon, Tenn.

Personal History: Usual diseases of childhood. Typhoid fever at about 15 years of age. Specific history negative. Menses regular.

Family History: Father died at about 50 with "kidney trouble." Mother living at 60.



Several brothers and sisters living and healthy.

History Present Illness: About three years ago, while employed as a house-girl, she noticed soles of both feet grew tender and began to swell. Shortly this swelling increased,

extending to the ankle and lower leg. This made it painful to walk. The swelling continued. She was treated about 18 months for "dropsy." I saw her first in May, 1913. The appearance of the patient was very much as shown in the accompanying photo. On examination found slight temperature. Pulse 90; otherwise heart action was normal. Respiration normal. Complained of pain in epigastric region. No other complaint at that time. At present she complains of pains "lightning" in character, beginning at the toes, passing through the body to the top of head. She is unable to stand and does not lie down and hasn't in two years. Says she can't breathe good when she does. The white area noticed on left leg was an ulcer which has cleared up under antiseptic treatment. Through the cracks and fissures in the skin on both feet and legs there is a dirty gray foul smelling serous discharge. Appetite poor. Digestion fairly good. Bowels and kidneys acting well.

Book Reviews

BOOKS RECEIVED.

Diagnostic Methods. A Guide for History Taking, Making of Routine Physical Examinations and the Usual Laboratory Tests Necessary for Students in Clinical Pathology, Hospital Internes, and Practicing Physicians, by Herbert Thomas Brooks, A.B., M.D., Professor of Pathology, University of Tennessee, College of Medicine, Memphis, Tenn. Sec-

ond edition. Revised and rewritten. C. V. Mosby Co., St. Louis.

Practical Sanitation. A Handbook for Health Officers and Practitioners of Medicine, by Fletcher Gardner, M.D., Captain Medical Corps, Indiana National Guard; First Lieutenant Medical Reserve Corps, United States Army; Health Commissioner of Monroe County, Indiana, and James Persons Simonds, B.A., M.D., Professor of Preventative Medicine and Bacteriology, Medical Department, University of Texas; Lately Superintendent, Indiana State Laboratory of Hygiene. Illustrated. C. V. Mosby Co., St. Louis.

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GALL STONES OR CHOLILITHIASIS *

By J. B. Haskins, M.D.,
Chattanooga, Tenn.

Nicety in diagnosis belongs to medicine as an art and any old diagnosis will do for medicine as a trade. The importance of this subject may be gathered from the facts that post mortem records on persons of all ages and both sexes prove gall stones to be present in from 5 to 10 per cent. of all cases.

Pathology and Etiology. Gall stones, which when small, are often spoken of as biliary sand, may vary in size from a concretion hardly perceptible to the naked eye, up to a mass the size of a tennis ball or even larger. The largest ever described was an elongated stone found in the common duct and weighed approximately four ounces. Their color is variable owing to the element that predominates in the composition; their usual colour is a dark yellow or brown. In consistency they are ordinarily firm, but may, without difficulty, be fractured by pressure between the thumb and forefinger. They may, however, be as hard as a uric acid calculus or as soft as half set putty. The chief constituent of gall stones is Cholesterolin, but bile pigments, bile salts, lime, mucus, degenerated epithelium and rarely foreign bodies may enter into their composition,—Magarate, stearate, and palmitate of lime combined with mucus usually form the cement which

bonds the cholesterolin crystals together to form a concretion.

That cholesterolin, when ordinarily present in all persons, should form concretions in some and not in others, may depend on several causes; in some cases cholesterolin may occur in positive excess, while in others there may be a diminution of the bile salts which should hold it in solution, or it may be precipitated from solution.

There is no doubt that catarrh of the mucous membrane of the bile passages increases the amount of cholesterolin present and that the longer bile remains in the gall bladder, the more cholesterolin will it contain. Anything, therefore, which causes stagnation of bile may predispose to gall stones; on the other hand, whatever leads to a regular emptying of the bile passages will tend to clear out such detritus as cast off cells, incipient collections of cholesterolin crystals and mucus and thus tend to prevent the formation of gall stones.

Predisposing Causes. (1) Age. Cholilithiasis is rare under 25 years of age and when found is usually in a female who has borne a number of children or had typhoid during the period of adolescence.

(2) Sex. Seventy-five per cent occur in women, supposedly due to the following causes: Pregnancy, and conditions favoring the stagnation of bile, viz.: Corset wearing, nephroposis and enteroptosis, sedentary life, learning, forward occupations, constipation and depressing emotions.

(3) The Gall bladder is a favorable habitat for micro organisms, especially the bacillus typhosus, steptococcus, staphylococcus, pneumococcus and bacillus coli.

*Read before East Tennessee Medical Society and Chattanooga and Hamilton County Medical Society.

Diagnosis. In every phase of medical practice today the emphasis is being placed, and justly so, on correct and early diagnosis. We all know that it is not wise to wait until the complications of gall stone diseases arrive, angiocholitis, cholecystitis, hepatitis, endocarditis, cancer of the gall bladder, chronic pancreatitis, perforation of the gall bladder, or bile ducts, biliary fistula, or peritonitis, before a diagnosis is made. Diagnosis takes time, but there are people who are willing to pay for the physician's time, and if perchance we are practicing for a class of people (as most of us young physicians are), who are not able to pay for our time, we should place the scientific above the commercial and take the time. And if we will only do this,—speaking to the younger men of the profession, I see no reason why we should not be classed some day in the near future as diagnosticians.

Graham and Guthrie have distinguished four stages in the development and symptomatology of gall stone disease.

(1) "These patients with mild disturbance usually gastric and often lightly considered by the patient and physician. These are light attacks of distress, gas, upward pressure, coming frequently soon after food, or at irregular times, often of sudden onset and short duration, and are eased by belching, slight vomiting or regurgitation, or slip away almost unnoticed and without treatment, the various measures may be credit for their relief. These sudden, irregular, mild dyspeptic attacks are quite as typical of gall-bladder disturbance as are the severe typical attacks which, as a rule supplant the mild.

(2) "There is another class of patients with more or less prolonged, dull pain in the epigastric area, right hypochondrium or whole liver area. This pain may be increased by food, exertion, or motion; deep respiration gives pain, and when located posteriorly the trouble may wrongly be called pleurisy. These patients pass through prolonged, steady attacks, their distress may alternate with ease, and comparatively good or excellent health may be enjoyed for a time. During an attack dyspeptic symptoms are found to be present, and but for the irregularity as compared with ulcer, one might oftenest consider gastric lesions."

Liehty of Pittsburg, estimates that 75 per cent of all gall stone cases are associated with a disturbance of gastric secretion, and of the 75 per cent, two-thirds have hyperchlorhydria. Gastric secretion and motility is disturbed in about the same proportion of cases. He confirms Rolleston's statement that indigestion is a frequent result of gall stones and so-called irregular biliary colic not infrequently manifests itself as dyspepsia. In the height of the attack of biliary colic the gastric secretions may be subnormal or Hcl. may be absent, while during the interval there exists a hyperchlorhydria.

These findings have a physiological explanation as witness the experiments of Cannon and Murphy. Cannon particularly has shown that the dominant control of the pylorus lies on the duodenal side of the pylorus, and any disturbance there, such as of the biliary, pancreatic, or duodenal function, may disturb the normally well-balanced mechanism of the pylorus. Pylorospasm is said to be accompanied by disturbance of both the secretory and motor functions of the stomach.

In the light of the experimental work and clinical observations of the numerous investigators, hyperchlorhydria is a finding to be looked upon as significant of a definite pathological condition, which may be determined positively by reviewing the rest of the symptom-complex.

(3) "In the third class a gall bladder disease is to be found, the great number in whom the correct diagnosis is made, and in this class surgery finds its greatest activity. Here we have the so-called typical gall-stone attack,—sudden, severe, epigastric pain, radiating to the back or scapular region, spasm of the diaphragm, upward pressure, gas, nausea, vomiting, and after a longer or shorter terrific attack comes sudden cessation, and until complications occur, almost immediate return to health. Sudden onset and sudden cessation without apparent cause or without treatment are quite peculiar to gall-stone disease when complications are not present. These attacks come irregularly, night or day, and oftenest bear no relation to food, the often called acute indigestion, gastralgia, neuralgia of the stomach, gastritis, gastro-duodenitis, and other equally incorrect names.

(4) The fourth condition is that of chronic gall-bladder trouble, adhesions, duct obstruction, contractions, and duct infections with pancreatitis. Often in this class chronic gastric disturbances predominate, and the picture is so closely related to chronic ulcer with complications that a differential diagnosis cannot be made if only present symptoms are considered. A correct diagnosis depends on a very careful review of the early history and the symptoms leading up to present conditions."

As a confirmation of our new conception of gall-stone disease, the pathologic studies of MacCarty are important. He concludes from a careful review of 365 cases that the gall bladder, liver, duodenum, pancreas, and stomach are embryologically, anatomically, physiologically, and pathologically closely related and should be considered a gastric-duodeno, hepatic, pancreatic, physiologic system.

Cabot places gall stones as a cause of jaundice third in the list, precedence being given to icterus neonatorum and sepsis. By the time "Nature hangs out the yellow flag of jaundice" (Mayo) the case is too evident to give any zest to its recognition. If jaundice is prolonged there is great loss of weight. Courvoisier's law holds good, the long standing jaundice in 84 per cent of cases of stone in the common duct is usually associated with a contracted or functionless gall bladder. Cabot also gives prominence to chills as a symptom. Rigors may occur at about the same hour each day and last for fifteen or twenty minutes.

Mayo Robson states that tenderness midway between the right costal cartilage and the umbilicus is almost as significant of inflammatory trouble about the gall bladder as is tenderness at McBurney's point of appendicitis.

Gall stones may be found in the stools from two to seven days after an attack of colic. The cystic and common ducts are capable of such distension that they may allow the passage of a calculus as big as a hazel nut. The common duct when distended may be as large as a coil of bowl. (Dieulafoy).

If obliteration of the common duct lasts long enough the patient shows whitish stools, due to the absence of bile and the presence of non-emulsified fats. Chills and an intermittent fever will make their appearance, the nature and cause of same having been so well describ-

ed by Charcot. The urine is loaded with bile pigment and shows a characteristic mahogany color. Radiography is most advantageous in many of these cases.

It still remains for us to differentiate between gall stone and other diseases, such as gastric and duodenal ulcer and chronic appendicitis. The average age of 40, absence of attacks in earlier years, especially during the period of adolescence, no relation to ingestion of food, mildness of digestive disturbance, sudden appearance of pain and sudden relief, the radiation to the back, the right axilla, and to the right shoulder are distinguishing features.

Treatment. It is undoubtedly true that a big per cent of gall stone disease in which a correct diagnosis has been made are apparently cured by medicinal treatment. Scientifically such a cure is impossible, as the calculi remain in situ, but are at rest and give rise to no evident trouble. The patients often consider themselves well, but they are always exposed to relapse, and the continued pressure of the stones is believed to be conducive to malignant disease.

W. J. Mayo says that the successful passage of a stone is not a contraindication, but a positive indication for operation, as there are always more calculi to follow, and the next ones may become impacted in the common duct, thus necessitating a grave instead of a safe operation. Few modern surgeons advise much loss of time before operation is decided on.

I shall not attempt to describe the different operations pro and con for gall stones, as each operator present has a mental picture of the operation preferable to him.

CHRONIC STENOSIS OF THE ESOPHAGUS DUE TO SIMPLE INFLAMMATION.

By Richmond McKinney, M.D.,
Professor of Diseases of the Nose, Throat and Ear, University of Tennessee College of Medicine; Oto-Laryngologist to City, Baptist Memorial and Luey Brinkley Hospitals, Memphis.

My attention was first directed to the possibility of recurrent contractions of the esophagus with concurrent inflammatory stasis resulting in permanent organic stenosis

through the history and clinical experience obtained in a case presenting to me several years ago, and some time before I began to use endoscopic methods for diagnosis and treatment, means which have so greatly promoted and facilitated the study and treatment of various pathological conditions of the trachea, bronchi and esophagus. The case was that of a young man, aged about thirty, coming from Arkansas, in whom the following history was gleaned:

Beginning several weeks before, without any apparent cause, he had begun to experience slight difficulty in swallowing, this difficulty increasing, but with no pain on swallowing. The week before he came to me, the difficulty in deglutition became so pronounced that he even was unable to swallow water. Strength, naturally, rapidly began to desert him, and in a state of almost complete exhaustion he was brought to me. In my office, I was unable to pass even the smallest filiform bougie through the esophagus to the stomach, and nourishment being imperative, I sent him to a hospital for a general surgeon to do a gastrostomy. This was done, and I then succeeded in passing a small-sized linen bougie from the stomach up through a well-organized stricture, which was situated in the upper third of the esophagus, and thus dilated it. Unfortunately, however, two days later, while sitting up in bed after taking fluid nourishment, the young man fell over dead. No autopsy was permitted, so we did not ascertain the definite cause of death, nor could we determine the character of the stricture. Later study, however, with esophagoscopy investigations, would incline me to classify this as a stricture from inflammatory stasis.

The classical grouping of strictures of the esophagus has heretofore been, first, those due to malignancy; second, those due to traumatism, such as the erosion of chemical caustics; and, third, those due to cardiospasm. That there could be a chronic stenosis of the esophagus occasioned through a simple inflammatory condition, perhaps due to a localized inflammation of some kind, was not regarded seriously, and it has remained for comparatively recent investigations to demonstrate the fact that permanent strictures, at times endangering life, may so arise.

I saw in April, 1908, a woman, member of a prominent Tennessee family, 72 years of age, referred to me by a local colleague, and who said that the morning of that day, while eating pork chops, she got something in her throat, which she thought perhaps might be a piece of bone, and that since then she could swallow absolutely nothing, not even water. There was no pain, the chief symptom being a choking sensation. In my office she attempted to swallow water, but after an ineffectual struggle to do this the fluid was regurgitated. I introduced a linen bougie, passed it down the esophagus and found contraction at the introitus, which resisted passage of the bougie, but finally yielded, and the bougie was passed as far as the stomach. Immediate relief was experienced, and water was swallowed without difficulty before the patient left my office. She afterward did very satisfactorily, but from time to time, as reported to me by her son, the patient living in the country, during the intervening period until I again saw her, she experienced similar attacks of spasmodic contraction, and a few months before I next saw her, the difficulty in swallowing rapidly increased. I saw her on February 1st, 1912, confined to her bed, considerably emaciated and swallowing with great difficulty, although experiencing no pain. Small linen bougies were introduced every three or four days by me, and although they encountered great resistance at the introitus, I could get them past the obstruction and the patient could swallow better afterward. On February 11th, with cocaine anesthesia, I practiced esophagoscopy, and located an annular stricture at the introitus, with a very small opening. Using a seven-millimeter Brinnings tracheoscope, I succeeded in passing the end of this beyond the stricture, and after that swallowing was much easier for several days. However, narrowing of the stricture again set in, and the patient was so weak and nervous that she could not undergo prolonged esophagoscopy examinations. I could only attempt dilatation with linen bougies, but even this was a physical and mental hardship to her. There was considerable swelling in the thyroid region during the latter stage of her illness, but no glandular enlargement, no pain and no evi-

dence of malignancy, either as shown by the esophagoscopy examination or by physical manifestations. The advanced age of the patient, together with the great physical depreciation shown in her case, which made it likely that she would not stand the shock of the anesthetic and the necessary surgery, caused the general surgeon called in consultation to refrain from advising a gastrostomy. Reliance for support of life was placed upon such fluid nourishment as she could receive through the narrow esophageal lumen, and per rectum, and this not proving sufficient, she gradually lost strength, and the latter part of March the case terminated in death. History, dating back some four years, of gradually increasing spasmodic contraction of the esophagus, the comparative freedom from pain, the absence of evidence of carcinoma on ocular inspection, and other physical considerations which are to be attached to a diagnosis of malignant growth, precluded such consideration on my part. I regarded this as an unusual example of spasmodic stricture, beginning doubtless with the local irritation complained of when the patient was first seen by me, with a gradually increasing inflammatory stasis, which brought about hyperplastic changes resulting in permanent stenosis.

G. B., aged 62, a warehouseman, was referred to me by a local colleague in December, 1912, for an increasing difficulty in swallowing, which had begun about eight months before. There was no pain at all on deglutition, but food seemed to be arrested in the upper portion of the esophagus, and frequently was regurgitated. He had not lost any weight, and, in fact, was gaining in flesh. His normal weight was about 165 pounds. Mr. B. could not recall having swallowed a bone or any other irritating substance.

Esophagoscopy, with cocaine anesthesia, showed an annular constriction at the introitus, through which I was enabled to pass the end of a 7 mm. Brunnings tracheoscope. This constriction showed no ulceration, and was yielding in character. The stricture was 24 cm. from the incisor teeth. Dilatation of the stricture was practiced, using flexible steel bougies, with the aid of the esophoscope, at intervals of from four to six days, for sev-

eral weeks subsequently, with considerable improvement in the patient's ability to swallow. He gained weight, and on January 5th, twelve days after the first dilatation, weighed 168½ pounds.

I have not seen this man recently, but since he discontinued having the stricture dilated before I gave my consent to this, I presume I shall hear at a later date that he is having further trouble. This case also was evidently one of localized inflammation, due probably to spasmodic contractions, and showed no evidence whatsoever of malignancy.

The literature of esophagoscopy is exceedingly meager in its contributions to this subject, and I have been able to find only one article that is notably thorough in this respect. This is one by Guisez*, and in which he says that the esophagus is capable of becoming completely stenosed under the influence of irritation, and of simple chronic inflammation. In several cases where there might have been doubt, he has had microscopic examination of portions of tissue removed from the suspected locality. He finds that inflammatory stenoses localize at the contracted extremities of the esophagus—cervical and cardiac ends—and sometimes also at the site of the crossing of the arch of the aorta. Inflammatory stenosis is established by two different processes. One of these is simple thickening of the wall and circular cicatricial contraction consecutive to esophagitis. This esophagitis may be due to chronic irritation, indigestion, alcohol, incomplete compression, adenopathy, neighboring tumors, aortic ectasis. The other, and most frequent cause being spasms, terminating in permanent stenosis. In the beginning there is a simple spasm, which is repeated, and causes a subjacent stasis; then through inflammation spasmodic contracture and complete closure of the canal at this location result. The alimentary stasis following upon this then causes inflammation of the esophageal wall, which frequently results in cicatricial degeneration. The initial spasm is due to some local cause; it is never found in patients who do not eat rapidly and masticate poorly. Consecutive to these inflammatory stenoses, retro-dilatations are produced. These are diverticula situated in the upper portion

of the esophagus, and the large idiopathic dilatations of the lower portion.

Chevalier Jackson, the dean of American per oral endoscopists, in a personal communication, says that he has had several cases

Never at any time did I regard this case as a malignant esophageal growth, for the bearing out the observations of both Guisez and myself, and in his address on "The Recent Progress of Endoscopic Methods as Applied to the Larynx, Trachea, Bronchi, Esophagus and Stomach," before the International Medical Congress in London, he says: 'In certain cases there are undoubtedly lesions of the mucosa in the esophagus and also in the stomach which could easily excite spasms, and it is equally certain that the stagnation due to the spasm, and consequent fermentation of food, detention of secretions and maceration could very easily excite or perpetuate the lesions. Thus we have a 'vicious circle' in hiatal and abdominal esophagismus. Observations by Guisez, McKinney, and also some observations of my own, point clearly to the fact that these lesions can also produce organic stricture.'

The extremities of the esophagus, particularly the upper third, present very favorable localities for the formation of strictures due to localized inflammation. There is an anatomical contraction of the esophagus at the extremities, and the walls constantly lie in opposition. There is no reason why the peculiar susceptibility of the urethra to the formation of strictures should not obtain likewise in the esophagus, for here is a very similar structure, especially so far as its lining and its vascularity are concerned. It is readily conceivable how frequently repeated spasmodic contractions of the walls of this canal are due to localized irritation may result in stasis and the formation of a well-organized stricture from the deposition of plasma cells in the surrounding connective tissue stroma. This condition is to be differentiated from cardiospasm largely in the character that the stricture assumes, for here we find an organic stricture, whereas cardiospasm causes hypertrophy of the esophageal musculature, with atony and dilatation following, but does not cause a true organic and annular stricture of the esophagus. Furthermore, the anatomic

location of the obstruction in the cardiac end of the esophagus is diagnostic in this condition. Plummer*, in his most interesting study of forty cases of cardiospasm, says: "Cardiospasm is not often present in inflammatory conditions of the esophagus which come under observation. Evidence of esophagitis previous to the onset of the cardiospasm could not be elicited from any of the cases." But in these cases of organic inflammatory strictures of the esophagus, I believe there always is a primary esophagitis, due to some form of localized irritation. Wherever there is complaint of the least difficulty in swallowing, and if there has been traumatism of any kind, such as from the swallowing of a bone or other foreign body, the primary esophagitis should not be overlooked, for early attention given the condition may prove instrumental in avoiding later direful consequences. Traumatic stricture, of course, readily is excluded by the history, and certainly can be on esophagoscopy examination. Early cancer of the esophagus may be confused with this condition, but the esophagoscope readily clears up the diagnosis.

Either of the cases reported by me, occurring as they did in elderly people, would in pre-esophagoscopy days have been regarded as strictures due to malignancy, but the esophagoscope determined definitely that such was not the case.

The esophagoscope is invaluable in determining the character of esophageal lesions. Prior to its introduction a majority of the strictures of the esophagus that were not traumatic, occurring in adults, were regarded as malignant, but investigation with the esophagoscope has modified this belief, and we are learning that even in old people we can have well-organized strictures of the esophagus which are non-malignant in type, and which, however, may in a mechanical way bring about a fatal termination. Investigation of the condition of the upper end of the esophagus has become routine practice with me.

It is unnecessary for me to emphasize the necessity of extreme care in practicing esophagoscopy in these cases, for this necessity exists in all esophagoscopies, inasmuch as this is instrumentation attended by considerable possibilities of harm to the patient, and espe-

cially where inflammatory action has increased the susceptibility of the esophagus to traumatism.

TREATMENT OF TABES DORSALIS.*

By A. W. Harris, M.D.,

Associate Professor of Neurology, Vanderbilt University, Nashville.

To approach the treatment of any disease in an intelligent manner, we must know its etiology, and understand its pathology, otherwise our efforts are largely empirical.

While the majority of the profession were willing to admit a definite relationship between Tabes, Paresis and Syphilis, it has astonished them greatly to know that these diseases are one, and we will be sometime adjusting our ideas to these new relations. No longer can we regard them as some mysterious after-effect of syphilis, but must face the fact that we are dealing with a very definite spirochetæ infection, one located in an area hardly suspected, and quite inaccessible of approach by way of our usual therapeutic channels.

Since the demonstration by Noguchi and Moore of the spirochetæ in the tissues of the cord, all other fundamental etiological factors have become minimized in value, and while there are many so-called contributing causes, they are of little importance in comparison. Why one patient out of one hundred with syphilis should develop tabes, another paresis, and probably the other ninety-eight, under practically the same conditions, show no evidence of the late nervous system involvement, are questions for the future to answer. There are many plausible theories, but no proven ones.

The pathological process is one of those peculiar selective involvements affecting, principally, if not wholly, the sensory side of the nervous system, and even in most severe cases rarely or never involving all of this, and while the most obvious changes are seen in the posterior columns of the cord, when one considers the minute anatomy of these col-

umns the question arises, is this its primary seat?

Most text-books state that the initial pathology in tabes is still unsettled, with a tendency to consider a root or ganglion origin, or just at the point where the posterior root enters the cord, where there is little myelin and a contact with a probably thickened pia. On the other hand, Starr, in a recent (1909) edition, makes the bold assertion that "the primary lesion lies in the posterior spinal ganglia and in the ganglia of the cranial nerves." This position would seem reasonable when looked at in the light of Wallerian degeneration, but after so boldly starting his chapter on pathology with this statement, he winds it up with, "While the lesion in tabes is limited to the sensory neurons of the nervous system, it must be admitted that no satisfactory theory of its pathogenesis exists." So far as I am aware no recent investigator has isolated the spirochetæ from these ganglia, and since they have been found in the cord itself we must naturally feel that here is the primary seat of the pathology. The actual pathological changes are those of sclerosis and degeneration with increase of neuroglia and a few glia and spider cells. Mott contends that sclerosis is never a primary condition, but is due to some irritant either toxic or inflammatory, producing it as a secondary result. The spirocheta, either by its mere presence, or the production of its toxins, furnishes this element. But with all of this, no one has as yet determined the definite pathogenesis of tabes, and as Flexner says in his recent Harben lectures, "The pathogenesis of tabes is still unsolved. What seems established is that the lesion of the spinal cord and the clinical symptoms are determined by the pathological state of the meninges." He concludes this largely from the laboratory findings in the spinal fluid. But now since the exact etiological factor has been proven, the pathogenesis will surely be determined. It seems rather strange that we have so long been on the right trail and have only so recently proven it, but as Mott points out, it has been like looking for the proverbial needle in the hay-stack, and quotes Leviditi as saying that in paretics each convolution should be searched, and one has only to think a second to realize what a stu-

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pendous task this is—and even with this most diligent search, these investigators have not been so uniformly successful in locating them in *tabes* as in *paresis*.

It might at first glance seem that now since its cause has been definitely proven, that our treatment would be clear, and so it is, but in the past, while many have been satisfied that this was the only cause and have spent their efforts fighting it on this basis, poor results have been obtained and these failures are not of easy explanation. It is well known that the symptoms of *tabes* as a rule do not manifest themselves till some ten years after the primary infection (Mott), and the reason for this is still unanswered. What change takes place in the micro-organism during this time? Do they attain a resistance to the usual agents used to destroy them? Is it that their location is such that they are not reached by the ordinary methods of treatment? Or as some have suggested (Mott), do they go into a latent granular stage which is resistant to all known forms of treatment? In Noguchi's attempts to reproduce syphilis in the testis of rabbits with the spirochaetae obtained from the brains of paretics; while he was successful, it took from two to four times as long for the evidence to appear as in cases where they were obtained from a chancre. This would indicate that some change had taken place in those found in the nervous system. As to the second question, many points have been recently brought to light. By the ordinary methods of administering our remedies intravenously, intramuscularly, by the mouth, or by injection, we have poor evidence by the spinal fluid that they ever enter the nervous system, especially that portion in which the organisms have been found. This is also supported by Goldman's studies in vitalized staining of tissues by the introduction into the system of trypan blue, etc., he found he could not stain the central nervous system by administering it by any of the channels except the subarachnoid space, and by this route he could stain all the cerebro spinal axis, except the cortex of the brain, and this was only stainable by introducing the substance in the cerebral part of the subarachnoid.

The spinal fluid is supposed to be secreted largely by the choroid plexus and this fluid,

as Mott contends, serves the same purpose for the central nervous system as the lymph does for the body. Very few agents are allowed to pass through the choroid plexus, and after the administration of salvarsan by any means, arsenic is rarely recovered in the cerebro spinal fluid; so on this basis we have no proof of its ever reaching the seat of disease; again it is well known that in this type of infection there is frequently an obliterative endarteritis present in the smaller arterioles, which is a factor in preventing a direct approach, and even though these statements be unfounded, Mott is still unconvinced that there is not, as in the trypanosome disease, a granular stage of the spirochaetae in which they are not destroyable by any of our known therapeutic agents. Any of these may explain our past failures.

With these facts and theories before them, Swift and Ellis tried some therapeutic experiments with the administration of salvarsan and neo-salvarsan directly into the subarachnoid space and found that this plan was not practical because the drug was actively injurious to the nervous elements of the cord, even in very great dilutions, and in order to eliminate this danger they decided to first give the salvarsan intravenously, then draw the patient's blood and collect the serum and inject this so-called salvarinized serum into the subarachnoid space, thus introducing some salvarsan and probably also some antibodies, and giving these agents a direct approach to the causative elements. This method has produced some strikingly beneficial effects, especially on the laboratory findings in the fluid and also on the clinical course of the disease. Of course, time enough has not elapsed in which to draw any very definite conclusions, but the results so far reported certainly look most encouraging, and while before this method was suggested, benefit was given some of these cases by the ordinary use of salvarsan, since the introduction of the later method of administration the results have been much better. In our enthusiasm we must bear in mind several important things, the case of *tabes* with well marked clinical symptoms, always has more or less definite destruction of nervous elements in the central nervous system, and no such thing as regeneration

here has ever been reported, and it matters not how thoroughly we cure the active process certain defects will remain, though much that from a clinical standpoint might seem to be lost will be restored, and much that is lost may still be compensated for by the wonderful structure. But given a case with only symptoms enough to make a diagnosis certain, if this plan fulfills its promise it is truly epoch-making, and it is not too much to hope that if the procedure proposed by Neisser at the International Congress is followed, viz., that all syphilitics who have been treated (by whatever method) give a negative Wassermann for one year, before they are dismissed have their spinal fluid tested for the four reactions, proposed by Nonne, and if signs be found and the above treatment instituted, we will no longer have tabes to contend with. This may be too good to be true, but with our present knowledge of the subject it seems to be our duty to advise all cases of syphilis, before they are dismissed as cured, to submit to a lumbar puncture and at least determine what condition the central nervous system is in in relation to their infection. It has been suggested that the routine examination of the spinal fluid is not practicable, but we can and do make repeated lumbar punctures for other diagnostic purposes with practically no risk, and certainly if we can by this means prevent one case of tabes, it would be justified in any number of negative cases. Like all new procedures, this will have to pass some very severe tests before it can be called established, and since its use is attended with some risk and its technique quite elaborate, it will doubtless bring forth contradictory reports, but it is based on such reasonable and apparently scientific grounds, and as it is intended to be used in such hitherto hopeless conditions, that it can't but be received with enthusiasm by both physician and patient. A plea, however, for caution and the use of judgment in its application should be insisted on. The cases treated should be, at first at least, carefully selected, and the diagnosis should be confirmed by all known laboratory tests, and the laboratory man should be competent and avoid all chance of infecting the serum in its preparation, the operator should have faultless technique, or else we might

obtain such results as would retard the progress of an apparently most useful therapeutic measure. This is all very well for the early or future tabetic, but what, if anything, can be done for the developed case? One which has developed ataxia, some disturbance of bladder control and persistent lightning pains. Many of the symptoms of tabes seem to be due to the activity of the syphilitic process, and when this is cut short we only have the products of its operation left, and what are some of these? Optic atrophy, of course, will remain, and for this nothing can be done, fortunately few cases develop it and when one does he will be spared (as a rule) the distressing symptom ataxia. The Argyll-Robertson pupil is permanent (in spite of the fact that some have reported its disappearance), but since it causes in itself no harmful effects, it will not interfere with the well-being of our patient. The sphincter trouble, if severe, will always be with him, but if slight, much improvement or even complete restoration can be looked for. The lost tendon jerks are only diagnostic symptoms, and as far as the well-being of the patient is concerned are of no importance; they have been reported to have returned, not often, however. Lightning pains, girdle sensations, etc., are probably the product of the activity of the disease, and with a cessation of this should disappear. But what of the most disabling symptom (barring blindness), viz., ataxia? (I am, of course, speaking of the disease before it has reached the paralytic stage when all things are hopeless.) Probably more effort has been expended on this symptom than upon all others, and some really remarkable results have been accomplished at least in the hands of some men. What is ataxia? And to interference with what structures does its development depend? The tabetic tells you he has no knowledge of the position his extremities occupy in space or in relation to his trunk or to each other, and when he attempts to move them the complicated nervous action bringing into play many muscles and joint activities, which to the normal individual are almost automatic, it is done in a disorderly manner, and usually done with an exaggerated degree of movement. The various theories advanced to ex-

plain the phenomena of ataxia have their adherents. The motor theory, the cerebellar theory and the sensory theory. The last is the only one to stand the test of time and investigation, and now this has been narrowed down to include practically only the loss of joint and muscle sense; however, this does not satisfactorily explain ataxia, for why one should develop it early, another late, one in the upper extremity, another in the lower extremity, with other clinical manifestations about equal, cannot be satisfactorily explained on a greater or less involvement of these structures, for most symptoms are dependent on their affection.

Edinger advanced his exhaustive theory, and seemingly it was applicable to many cases, but was not satisfying because it did not fit all. In a recent number of the *Journal of Nervous and Mental Diseases*, Maloney has a very comprehensive article on fear and ataxia, this treats of the psychic element in ataxia and is quite well sustained. In proof of this we have all seen the so-called traumatic tabes. A man with a spirocheta infection in his cord receives a shock and develops ataxia, and he then has the (so-called) traumatic tabes. Of course, the discovery of the micro-organism in the cord has set this type forever at rest, but these examples, rare as they are, are proof of the psychic influence. It is well known that the blind tabetic are not ataxic and that an ataxic tabetic, losing his vision, his ataxia either becomes stationary or improves; this was such a striking and constant phenomena that it was called Benedict's law. They, at that time, thought that the presence or advent of optic atrophy exerted some curative or arresting influence on the tabetic pathology, which was, of course, entirely erroneous. It is well known that when a tabetic begins to grow ataxic he brings into play his accessory co-ordination faculties and uses his eyes to tell him the position of his limbs, and when he closes them, he sways or even falls (the well known Romberg's sign). It is well known that when we lose one of our senses the others become apparently more acute, the reason for this is that we learn to concentrate our attention more acutely on the impulses coming in through those remaining, and sensations

which were so feeble as to hardly be felt at all are then perfectly perceived and translated in consciousness. Now all these things have been taken into consideration in the treatment of ataxia by the Frankel system of re-education of ataxic tabetics. Without going into detail, this method as originally taught by Frankel consisted of a series of exercises for both upper and lower extremities and trunk, beginning quite simply and gradually becoming more complicated, until finally, after a long and persistent course of training, the patient was again able to perform his duties; some remarkable results have been obtained, but relapses were common. Within the last few years Maloney has modified this method somewhat and taken advantage of the lack of ataxia in the blind, and now trains all with their eyes blindfolded, and while it is a little more tedious, the results are more permanent. The basis for these so-called cures by this method is that the part of the nervous system most affected are the sensory fibres of the muscle and joint sense, and the ataxia is not due to the destruction of all but to many of them, and the impulses coming in through those remaining intact are too feeble to be properly understood or translated by consciousness, and this puts these patients in a state of uncertainty or fear, and as Maloney aptly puts it, "Tabetics fear because they are ataxic and tabetics are ataxic because they fear." When he loses confidence in himself and begins to fear, and if his pathology is at all extensive, he has to be retaught to perform the simplest co-ordinated movement. Frankel says three things are necessary to enable us to learn something new, "The apperception must be precise, the attention of the mind must be concentrated upon it, and the mental impression it produces must be frequently repeated." Now, when movements has been relearned under these conditions they become voluntary acts unaccompanied by exertion. This is the basis of the Frankel re-education. Unfortunately all tabetics are not susceptible of taking on these educational requirements, some because of their extensive amount of pathology, some because of their lack of intellectual development and others because of their lack of patience or persever-

ance. It can be readily seen that in order to accomplish much, you must have the full co-operation of your patient, and he must be willing to work and persistently carry out his exercises, even though he can see but slight improvement from week to week. When these conditions can be obtained, the results are frequently most pleasing. On this same basis much can be done for the bladder disturbance; the early case should be instructed to have regular hours for the evacuation of his bladder, and should be told never to disregard an impulse to pass his urine, but attend to every "nature call" without delay; in this way this distressing symptom can be postponed almost indefinitely.

Now let us hope that the future generations will have less need to use the Frankel method, and if we will do our part toward the prevention of tabes, by the methods we now seem to possess, I for one believe they will.

SOME REMARKS ON GLAUCOMA.*

By E. C. Ellett, B.A., M.D.,
Professor of Ophthalmology, Medical Department,
University of Tennessee, Memphis.

To a body of men engaged in the treatment of diseases so dangerous to life, health and the pursuit of happiness, as many of those which you are constantly seeing, a disease of the eye probably appears to be a minor complaint. But the loss of vision is not a minor affliction, and I am going to ask your attention to a disease which, if untreated, leads as surely as anything can be to the loss of sight. This disease is glaucoma, and consists essentially in an increase of intraocular tension. We have in the eye, as in other organs, a constant inflow of fluid, mainly blood in the arteries, and a constant outflow of blood in the veins, and lymph in the lymphatics, and the relation between inflow and outflow is such that a constant intraocular pressure of about 20 mm. of mercury is maintained. If anything increases the inflow or decreases the outflow of fluid, the tension

will, of course, be raised, and we then have the condition which we know as glaucoma. There are, as you know, two forms of this disease, with some intermediate cases. Inflammatory glaucoma, or acute glaucoma, is an acute inflammatory disease of considerable severity, manifesting itself by all the symptoms of an acute inflammation, with, as a rule, very severe pain, and marked and rapid failure of sight. So severe is the inflammation that constitutional symptoms, namely nausea and vomiting and a moderate rise of temperature, are not unusual, and are apt to mislead one into thinking that it is not primarily an affection of the eye. The most suggestive thing in this affection is the dilated pupil, since in practically all other acute inflammatory affections of the eye, the pupil, unless normal in size as compared to its fellow and promptly responsive to light, is contracted. If then one is led to estimate the tension of the eye, the diagnosis is plain.

The chronic or non-inflammatory form of glaucoma is as different from this as possible. It is simply a progressive failure of sight and absolutely nothing else. There are a host of intra-ocular diseases affecting the retina, choroid and nerve, that can give rise to failure of sight, so that this symptom is of no diagnostic value. Glaucoma is a disease of middle age and later, and this chronic form is probably most often mistaken for cataract. The great calamity in such a diagnosis is that the patient is told that he should wait till the eye is blind and then have an operation. In glaucoma, that time is too late for any reasonable hope of improvement in the condition, and to encounter a case in which this advice has been followed is one of the tragedies of ophthalmic practice.

The difficulties in the way of making a diagnosis of chronic or non-inflammatory glaucoma are considerable. The pupil is dilated, it is true, but so it is in optic nerve disease, either neuritis or atrophy. The ophthalmoscope will settle many cases, but I do not find many more men in general practice who can use an ophthalmoscope than I find men in eye work competent to catheterize a ureter, make a pulse tracing, or even use a stethoscope intelligently. The shoemaker sticks to his last, and each of us finds him-

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self more at home with the instruments of precision in daily use in the work with which he is most concerned. But if you can use the ophthalmoscope, do not be led to think that it will solve all your trouble in detecting chronic glaucoma. It is of no use in acute glaucoma, because we can seldom see the eye ground in such cases. After all, what affects the vision in chronic glaucoma is a pressure atrophy of the optic nerve, and until this is well advanced and the cupping pronounced, it may be very difficult to tell it from a simple atrophy. I can cite one very striking example of this. A man, aged 43, with a history of lues and a free liver, consulted me in 1908 for failing vision in the right eye. The vision was 1-10 in that eye and normal in the left. The right nerve was atrophic and cupped and the left nerve slightly affected in the same way. Iodides and sweats improved the sight to 1-3, although the tension seemed to me to be elevated at times in the right eye. No further improvement followed this treatment, nor the addition of pilocarpin drops in the right eye. The tension became undoubtedly elevated in the right eye, and I then urged an operation as the only hope of saving him from blindness. Being loathe to have an operation, he sought other advice, and went to see a very good man in a neighboring city. The diagnosis here was atrophy, probably specific. He was dosed internally in a vigorous manner, was referred to a nose and throat man and had a submucous resection, and of course had his tonsils removed. When I saw him again after a winter spent in these healthful pursuits, he was a little worse, whereupon I gave him the name of a good man and sent him East with a roving commission. He saw three men, who must have been excellent men, since they all agreed with me, and from all he received a diagnosis of glaucoma, and the advice to be operated on. Confidence being restored, he returned and I operated on both eyes, the right one being by this time entirely blind. The result has been that the sight in the left or seeing eye has remained stationary without further treatment for three years, and I am satisfied that the operation did it. The tonometer shows the tension in the right eye 48, left 18-32.

I have left till now some remarks on the

question of the intra-ocular tension, since it is on the elevation of this that glaucoma depends. In fact, glaucoma is increased intra-ocular tension, and on its detection must the diagnosis rest. With the method of estimating the tension by the finger tips error was easy, and the comparison from time to time difficult. Still the method is very useful, just as the estimation of blood pressure by feeling the pulse is useful, but just as instruments of precision are now resorted to to estimate the blood pressure, so we are fortunate in having an instrument of precision for estimating, in millimeters of mercury, the intra-ocular tension. With this instrument at hand no one need be in doubt. The normal intra-ocular tension is from 15 to 25 m.m. The old way was to estimate with the fingers, and record an appreciable elevation as + 1, a considerable elevation as + 2, and stony hardness as + 3. With the tonometer, from 25 to 45 corresponds to + 1, from 45 to 65 to + 2, and above this to + 3. The numerous advantages of such an instrument will appeal to everyone, and especially are we able to tell the early cases and institute treatment early.

I have been teaching ophthalmology for some years and it has never appeared very necessary to spend much time with the embryo general practitioner trying to teach him treatment. If I can impress on him the points in diagnosis, I feel that anyone who can spell can look up the disease in the index and find more about treatment than I can tell him, and find it better told. For the same reason I only want to add a few words now on treatment. The treatment of glaucoma is largely operative. Some cases are favorably influenced by other means, and such cases can be handled medically, but for the large majority operation is the best thing.

You know that the classical operation for glaucoma has been the excision of a piece of the iris, an iridectomy. Proposed empirically, it leaves little to be desired in acute glaucoma, but is far from meeting the indications in the chronic form. The latter cases are best handled by the excision, in some fashion, of a piece of the sclerotic coat. The use of myotic drugs is certainly of value in many cases of chronic glaucoma, and if persistently

used will some time keep the disease at a standstill. There is no possibility of curing a chronic case by medical means, and the patient should understand that this treatment must be kept up as long as he lives. The alternative is operation, and but for one or the other, blindness. The so-called "newer operations" for glaucoma are decompression operations. You turn down a conjunctival flap, remove a piece of the sclera with a trephine or other means, and replace the flap. A successful operation establishes a permanent accessory drainage path, whether by filtration or fistulization, and so long as this is the case the tension of the eyeball is kept down with as much certainty as your automobile tire is kept deflated by a puncture. We do not know the cause of glaucoma, so we are forced to treat its effects, mechanical in their nature, by mechanical means.

TREATMENT OF RENAL, URETERAL AND VESICAL CALCULI.

By Wm. T. Black, M.D., F.A.C.S.,
Memphis, Tenn.

The treatment of calculi, whether in the kidney, ureter or bladder, is divided into the palliative or medical, and the surgical or curative. In cases of colic, morphine, hot applications, cupping, hot baths, etc., are tentative in their effect, but of course has no curative power, unless the patient is so fortunate as to have only one small stone, and passes that one. For the further medical treatment, a large quantity of water should be prescribed (some of the mineral waters preferably), rest, moderate exercise, with regulation of the diet (non-nitrogenous). Lithia has some virtue in preventing and diminishing some of the varieties of stone formation. Urotropine to prevent infections used afterwards as an urinary antiseptic is the best agent we have in the nature of a drug at our command. It also has some solvent action upon acid stones.

Renal Calculi.

Before operating for renal calculi it is to be presumed that a diagnosis has been made or at least all the prerequisites have been carried

out to make a diagnosis. The patient has probably complained of renal pain and all of the other classical symptoms of a stone, and that an X-Ray picture has been made, and whenever possible a cystoscopy to eliminate the bladder, and a ureteral catheterization performed with the various tests to determine the function of the kidneys and the patency of the ureters. When all of these tests have been carried out we can eliminate the bladder and ureters, but cannot with certainty say in a certain per cent of cases even then whether a stone is present or not, for uric acid stones which comprise a small per cent (about 8 per cent of all stones, according to Treves and others), do not cast a shadow (recently the per cent has been reduced), especially is this true in fleshy people. Before operating the patient should have the same preparative treatment that we use in abdominal cases. We must find out whether the patient has more than one kidney or not, for we might have a pyonephrosis, etc., which might necessitate a nephrectomy. In every 2,050 cases we find only one kidney present, and according to an authority 8 per cent of these solitary kidneys contain calculi. If a ureteral catheterization has been performed we can say in the larger number of instances that both kidneys are present, but cases have been reported when we would have present two ureters running up in their normal direction and then turn and cross over to the opposite kidney. Whenever we find the presumptive evidences of a stone, pain haematuria, radiograph showing infections changes in the kidney, then we are justified in operating. The diagnosis will only be presumptive, however, in only a small per cent of cases.

Operation.

The patient is placed either upon the healthy side or upon his abdomen with an air cushion underneath, so as to push the kidney backwards and increase space. A vertical (Simon) oblique (Von Bergman) or transverse incision is made, the oblique preferably for the reason that it can be carried as far downwards and inwards as needed. After locating your twelfth rib, commence your incision about one-half inch below it at the outer border of the erector spinae muscle, carrying it down about four inches to one inch above the anterior su-

perior spine of the ilium. Cut down to the latissimus dorsi and posterior portion of the external-oblique muscle, separate and go down through to the internal oblique and transversalis, being very careful not to open the peritoneum, watch for the twelfth dorsal and the ilio-hypogastric and its inguinal nerves, which are found between the quadratus muscle and kidney. If cut, suture. Separate your perinephric fascia, cut through your fat and separate from the kidney. In making the incision avoid cutting into the pleura, but if the kidney is very much enlarged it may be necessary to cut the twelfth rib, and in a certain number of cases the pleura will be cut, but it has been proven that it is impossible to have the lungs collapse when the patient is face downwards; suture the pleura and proceed as usual. If the symptoms have been on the right side and the findings are not as expected, open the peritoneum and explore. The appendix, when attached behind, often gives symptoms which might be confused with a renal or ureteral stone, especially is this true if we have the absence of blood and other cardinal symptoms of stones. The gall bladder may also be examined through this incision as well as the opposite kidney and other organs. After removing the perirenal fat a systematic search must be made for the stones, the upper end of the ureter, the pelvis and both surfaces of the kidney should be carefully examined. The stones are oftenest found in the pelvis or calices. A stone in the cortex often has a cyst or abscess over it. In exceptional cases where a stone or stones have been located by a radiograph, and you are unable to find them, a needle may be inserted to locate the stone, but very likely in the future development of kidney work the fluoroscope, as suggested by Squire, will be used. After bringing the kidney out, with cortex border outwards, locate your blood vessels and pack around the kidney before incising. The stones can be removed either by performing a pyelotomy or a nephrolithotomy, depending upon the location of the stone. If the stone is in the upper part of the ureter, in the pelvis and sometimes in the calices, they can best be removed by opening the pelvis, but if the stone is located in the cortex, or if large or multiple, and if severe infection is present,

they can best be removed by going into the kidney at the bloodless zone described by Max Brodel. This area is just posterior to the outer border of the kidney. Both operations may be required upon the same kidney at times. Suture your wounds in either case with catgut instead of silk for fear of the thread acting as a nucleus for other stone formation. A mattress suture may be used in nephrolithomy to control hemorrhage. The ureter should always be carefully probed in either operation to eliminate stones being present there. A post-renal drainage should be used, and if a chronic pyelitis is present it is best to insert a tube into lumen of the opening. In cases of calculus anuria, nephrotomy should be performed at once. The removal of a stone at that time would depend upon the quickness and ease of its removal. Cullen recommends cutting the kidney with a silver wire rather than a sharp knife in performing nephrolithomy, claiming that it lessens hemorrhage.

Ureteral Stones.

A diagnosis of ureteral stones must be made (besides the usual symptoms complained of) by an X-Ray picture and ureteral sound, a wavy tipped bougie or stylet is also useful. A stone in the upper end of the ureter can be removed through the pelvis, or by enlarging an oblique incision a uretero-lithotomy may be performed. Stones further down can be removed extraperitoneally, by extending your incision, if one has already been made higher up, by cutting one inch within the ant. sup. spine of the ilium and carrying the incision down parallel with Poupart's ligament to the int. ring. It is well when possible to insert your cat gut sutures before opening the ureter, as afterwards it is sometimes impossible. However, the incision being longitudinal, it is not at all essential to suture. Always drain with rubber tissue. Gauze should always be packed around the ureter before incising, but never used for drainage for fear of causing a fistula. Rubber tubes are dangerous, as sloughing of the iliac vessels have been reported. When the stones are hard to locate a peritoneal incision, as recommended by Gibbon can be made, the stone located, but removed extraperitoneally. Stones are oftenest found at both ends of the ureters, and when found near the vesical end can be seen through

a cystoscope and can sometimes be removed per vesically. Braasch, Bransford-Lewis and others recommend under the above conditions their removal through the operating cystoscope. Baker, Crawford, Mayo and others recommend a supra-pubic cystotomy for stones close to the vesical orifice. Through the operating cystoscope a stone near the bladder can sometimes be removed by dilating the ureter and injecting olive oil. At times stones in the ureter near the bladder can be pushed into the bladder by inserting a finger in the vagina of the female, or in the rectum of the male, massaging towards the orifice. If unable to do as above indicated, supra-pubic lithotomy should be performed, and if unable to deliver a stone some distance from the orifice into the bladder by this means, have an assistant insert his finger into the bladder, pushing the stone and ureter over to one side, making an incision in the inguinal region, and remove extraperitoneally. People suffering from renal and ureteral calculi should have their bladder examined for vesical calculi for the reason that they so often occur coincidentally with or subsequent to renal calculi. Stones located in the upper part of the urinary tract should be a warning or a signal for trouble further down. In such cases large quantities of water, exercise, proper diet, etc., should be rigidly carried out. In some cases where we have a right to expect stone formation, urinary antiseptics and bladder irrigation should be instituted. Stones in the ureter often pass spontaneously and require no surgical interference. However, we believe when positively diagnosed, they should be removed.

Vesical Calculi.

Stones in the bladder in this country are usually delivered by suprapubic lithotomy, especially is this true in this part of the country. In the larger number of cases stones may be removed by litholapaxy. Litholapaxy is probably more extensively carried out in some of the European countries than in this country. Freyer reports 1,358 cases of removal of stones from the bladder; 986 of which were removed by litholapaxy. He has found by perfecting

his technique, even in young male children, that stones may be safely removed by this means. He reports the removal of a stone weighing 3 1-4 ounces in a boy fifteen years of age. The youngest one operated upon in this manner was eighteen months old. The mortality from either route does not seem to differ much, but the time of morbidity is very much less in the urethral operation, for the reason that a large per cent of these stones can be removed without a general anaesthetic, and there is no danger of a fistula, hernia, cellulitis, and other complications which might occur following cutting operations. While it is true that litholapaxy can be performed safely and without complications in a large number of cases, yet it requires quite an extensive experience to perfect the technique, and in cases where we have large stones or numerous stones, stones imbedded in the bladder wall, in strictures of the urethra, in cases where we have bladder tumors, very large prostates, etc., then it becomes necessary to perform a suprapubic lithotomy. In performing a suprapubic lithotomy the patient should be put in the Trendelenburg position, the bladder irrigated with warm boric acid solution, and then distended with the same solution, ordinary suprapubic incision is made avoiding cutting into the peritoneal cavity. In large stones transverse incision allows a better field for its removal. A stone should never be forced through too small an opening in the bladder for fear of traumatizing it. If the bladder is infected drain, if not infected close the bladder and drain the space of Retzius. The surgical treatment of urinary calculi is one of the best achievements of modern surgery.

It has been my observation that the larger number of patients who have symptoms simulating renal or ureteral stones, and in whom you would make a clinical diagnosis of stones, are found after an X-Ray picture and a cystoscopy and ureteral catheterization not to have stones at all, but an infection usually of the pelvis of the kidney (pyelitis), which is usually amenable to internal and local treatment of the pelvis.

RADIOGRAPHS SHOWING THE BISMUTH MEAL IN NORMAL INDIVIDUALS TWO, SIX AND EIGHTEEN HOURS AFTER ITS INGESTION.

By John H. Maury M.D.,
Professor of Gynecology, University of
Tennessee, Memphis, Tenn.

In selecting subjects from whom the accompanying radiographs were made, only individuals who had never suffered from constipation or indigestion were accepted.

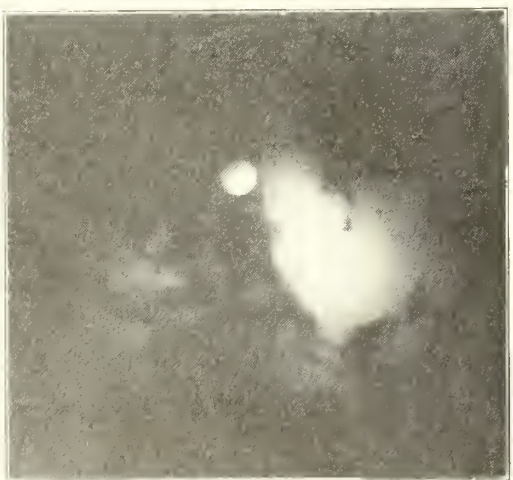
To find five women fulfilling these simple requirements was not an easy task, for, of thirty

nurses examined from an institution, 93 1-3 per cent. were constipated.

This is quite at variance with our findings in the colored race. The histories of one hun-



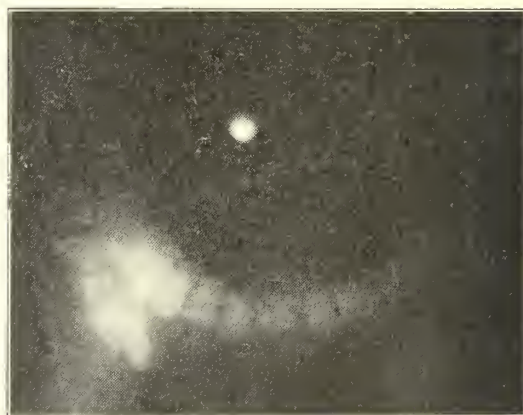
Case 1, No. 1 Taken immediately after bismuth meal, showing bismuth beginning at once to leave the stomach.



Case 1, No. 2—Two hours after meal. Stomach partially emptied, with some bismuth in small intestine.



Case 1, No. 3—Six hours after meal. Stomach nearly empty. A fair amount of bismuth in caecum.



Case 1, No. 4—Eighteen hours after meal. Bismuth has advanced to the splenic flexure.

dred patients applying to our out-patient clinic for treatment of pelvic conditions which we are accustomed to regard as predisposed to this condition, showing 39 per cent. constipated.

This difference is no doubt explained by the greater muscular development of the negro women and by their consumption of coarser and more laxative foods.

In the light of what in the past few years has been taught us by Metchinkoff, Lane, and others, concerning the evils of auto-intoxication, it would seem well to give this subject more than a passing thought as one of the

evils of civilization leading to race degeneration.

In the interpretation of the findings in ra-

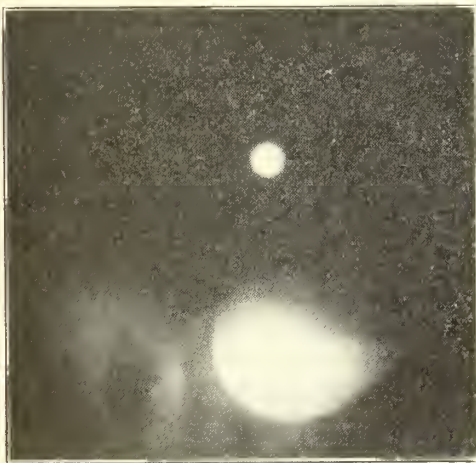
should have passed out of the stomach, the emptying process beginning at once as shown in case 1—No. 1. If in six hours there be no bismuth in the caecum it may be inferred that there is stasis at the ileo-caecal region for in nor-



Case 2, No. 1—Two hours after meal. Stomach a little slow, but some bismuth in small intestine.



Case 2, No. 3—Eighteen hours after meal. Bismuth well advanced to the splenic flexure, a small amount having gone into the sigmoid.



Case 2, No. 2—Six hours after meal. A poor picture, but showing bismuth in the caecum.



Case 3, No. 1—Two hours after meal. Most of bismuth having left the stomach and seen in the small intestine.

diographs taken for the purpose of determining intestinal stasis, greatest consideration should be given, not to the position of the viscera, but to the time taken for the bismuth to pass the slow points.

The slow points are the pylorus, ileo-caecal region and the colonic flexures.

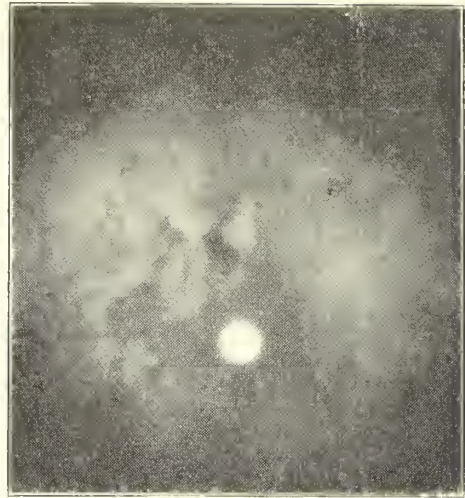
The time at which these points are passed varies within somewhat narrow limits. In two hours from one-half to two-thirds of the meal

mal cases by this time the caecum ascending colon and part of the transverse colon is usually well outlined.

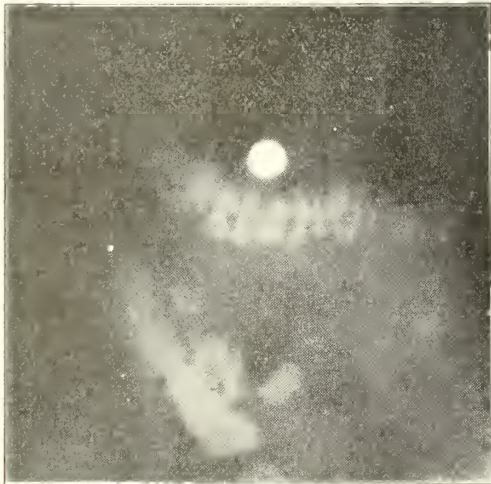
In eighteen hours the colon should be outlined at least to the splenic flexure though usually some bismuth has reached the sigmoid or rectum. Unless it has been administered by



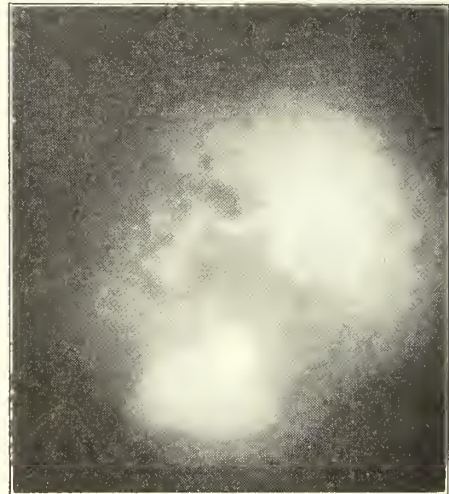
Case 3, No. 2—Six hours after meal. Stomach and small intestine empty. Most of bismuth in caecum and ascending colon. Some in the transverse colon. A rather rapid advance.



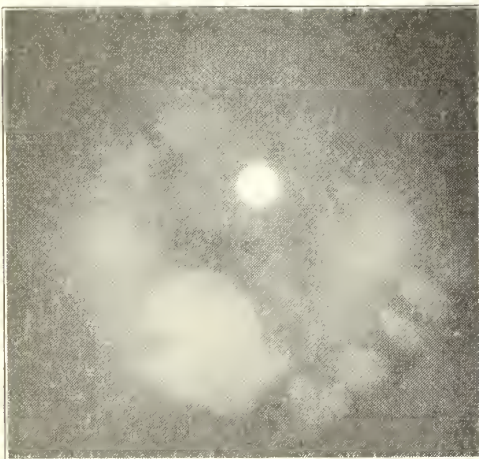
Case 4, No. 2—Six hours after meal. Bismuth well along in the colon.



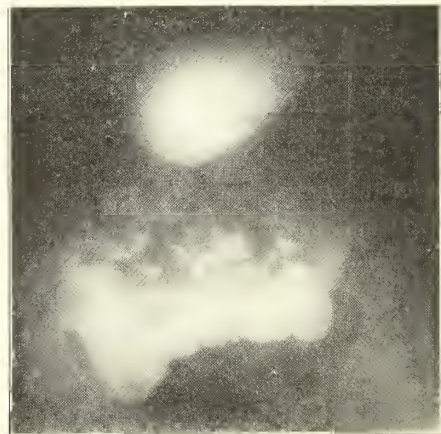
Case 3, No. 3—Eighteen hours after meal. Bismuth having advanced to the rectum, though most of it still strung out in the colon.



Case 4, No. 3—Eighteen hours after meal. Unusually rapid advance. The large mass is in the rectum. The smaller masses in the sigmoid.



Case 4, No. 1—Two hours after meal. Most of bismuth in small intestine. Stomach evidently rapidly emptying itself.



Case 5, No. 1—Two hours after meal. At least half the bismuth in the small intestine.

AN INTERESTING CASE REPORT.

By Herman Hawkins, M.D.,
Jackson, Tenn.



Case 5, No. 2—Six hours after meal. Bismuth in caecum and transverse colon. Some still in the small intestine.



Case 5, No. 3—Eighteen hours after meal. A small amount of bismuth in the first part of colon, but most of it in the sigmoid and rectum.

enema, radiographs rarely show bismuth in the descending colon. Assisted by the force of gravity contents are evidently passed through this portion of the intestine with great rapidity.

A comparison of the relative positions of the transverse colon in cases 2 and 3, are of interest in illustrating the fact that ptosis does not necessarily mean stasis. Case 2, with a markedly low transverse colon shows a more rapid fecal current than Case 3, with transverse colon in an almost text book position.

On March 8th, I attended Mrs. J. W. B. in her seventh confinement. Her age is 34 years; height 5 ft. 6 in.; weight 155 lbs. The date of her last menstrual period, May 12, 1913. Gestation period approximately 300 days. Labor began at 3 a. m., dilatation was complete at 10:30 a. m., head engaged in R. O. A. position, pains regular and of moderate intensity.

At 1 p. m. ether was administered by Dr. Leon Williamson, Elliot forceps applied and head brought down until perineum bulged, forceps removed, anaesthetic withdrawn, and labor terminated by natural pains at 2 p. m., no laceration of mother nor injury to child.

Infant—Male, weighed eighteen and one-half pounds, weighed by Dr. Williamson. Measurements made on the third day by Dr. Lusk and myself, length $23\frac{1}{4}$ inches, length of trunk 10 inches, circumference of head $16\frac{1}{4}$ inches, circumference of chest $16\frac{1}{2}$ inches, circumference of neck $11\frac{1}{2}$ inches, width of shoulders 8 inches.

Mother gives a history of her third child weighing 15 pounds at birth, and 35 pounds at 13 months of age. She was then living in Mayfield, Ky.

BOOK REVIEW.

Diseases of the Ear, by Philip D. Kerrison, M.D., Professor of Otology, New York Polytechnic Medical School and Hospital, etc. J. B. Lippincott Company, Philadelphia and London. Price, \$5.00.

This is one of the most recent, as it is one of the best, contributions to the subject of Otology. It has the stamp of originality, being a notable departure from the arrangement and discussion often noticed in former works on this subject. In this treatise otology is largely re-written and subjects which in former works have been treated very briefly, or entirely neglected, have been given a deserved prominence. Among these are the various phases of labyrinthine pathology, now receiving widespread attention, and cerebral complications of otitic origin are presented with a clearness that is refreshing. The style of the writer is pleasing and subjects are discussed in a logical sequence that facilitates understanding. The work is well illustrated with original drawings and the press work is fully up to the high standard of the Lippincott Company.

HILLIARD WOOD.

Memphis, City Wonderful

By EDWARD McCORMACK

Memphis—the City Wonderful—awaits you! High on the bluffs of the Chickasaws, above the turbulent waters of the Mississippi, the capital of an inland empire bids you welcome.

Go where you will, travel where you may, roam foreign shores or search these United States, and for progress, strength, beauty and learning you will find few cities that equal Tennessee's metropolis. In every respect it is the ideal convention city.

Even before the Indians, Memphis was the favored meeting place of man. The Mound Builders made the bluffs upon which Memphis now rears its lofty buildings their headquarters. This is plainly shown by their works, which still survive and make keenly interesting to the visitor one of the most recently acquired city parks.

That was hundreds and hundreds of years ago, for so ancient are some of the relics found in these mounds that they baffle the analysis of men who have made antiquities the study of a lifetime. But one thing is certain, and that is that here the Mound Builders lived and here they flourished until probably some savage tribe drove them from their haunts and finally exterminated them. At any rate, history tells us that the next inhabitants of the great bluffs were the Chickasaws, the Choctaws and the Quawpaws, all Indians and, as Indians go, wise and strong in their wisdom and warfare.

Memphis was known as their great place of council. A pretty legend tells us that upon one occasion, Chisca, chief of the Chickasaws, decreed that for a score of years no Indian should put his arrow to the string against a fellow brave. The Omnipotent One, so this legend says, had appeared to Chisca and told him that here all must be peace and quiet. Warfare weakens men and the Chickasaws had been demoralized by their many tribal battles. Chisca's decree was obeyed to the letter and a time came when his tribe ruled over all of the valley and were known as the Nation of Peace.

The old chief's fame for wisdom and learning spread to such extent that even the far away Delawares and the roving Seminoles sent peace delegates to his long wigwam.

Now, do not misjudge me. It is no intention of mine to say anything that might dim the glory of the old chieftain, but when we study his career we must admit that the wily Chickasaw soon found that he could capitalize the advantages that nature had given to his camp site, and so he encouraged these visits and incidentally hinted that his tribe were good folks with which to deal.

North to the Ohio, south to the Everglades, west to where roamed the wild Apache, and east to the campfires of the learned Delawares spread the news, and although there was not much interchanging of goods in those days as compared to the intercity trade of our time, still the sagacious Chisca soon became big enough to have been subjected to government inquiry and regulation—had there been a Congress to probe him at that time.

This established the site of Memphis as a place of trade. When DeSoto, after cutting his way through the forests and the hostiles, at last found himself upon the banks of the Mississippi at the point where Jackson Mound Park now is, he was surprised to find that just to the north of him was a thriving village where commerce and not warfare was the principal occupation.

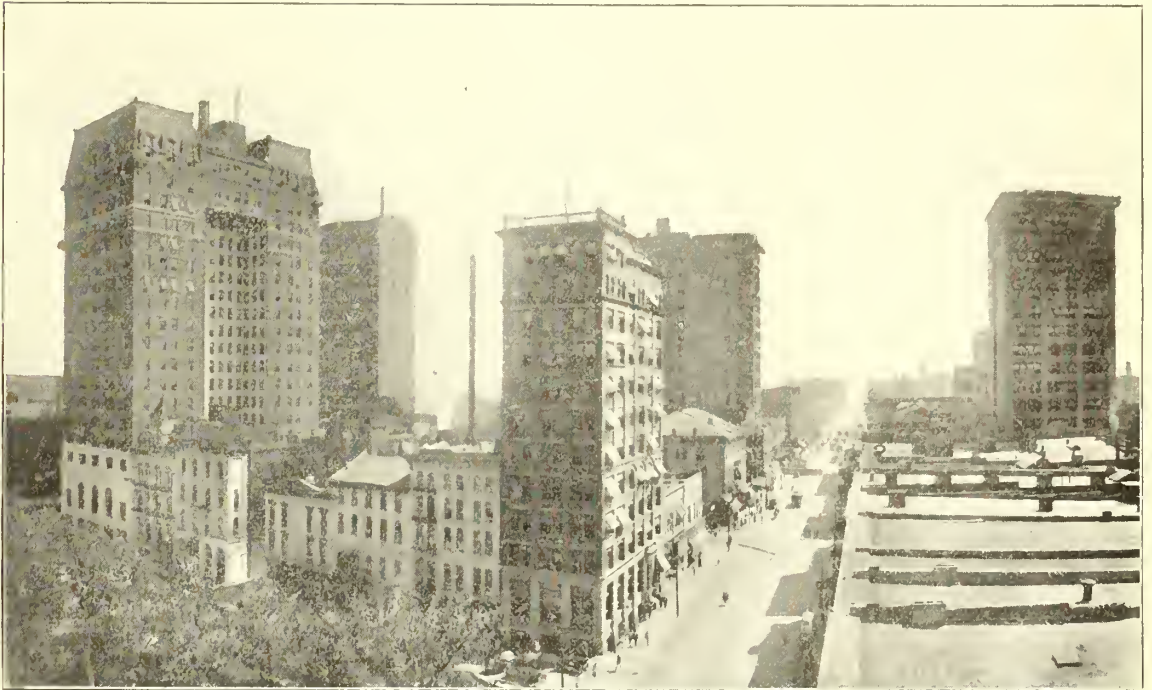
The Spanish Discoverer gazed out across the Mississippi and, like Sir Lannefal, he had seen his greatest destiny. A short time later he died and with the subdued roar of the great river as his funeral dirge, his remains were buried by night beneath its surface.

So runs the story that is history. DeSoto had come and his followers told such graphic stories of the wealth of the new country that it was only a short time before a Spanish settlement and blackhouse were built on the banks of the mighty stream. The Chickasaws welcomed the newcomers and dealt with them and grew richer. Indian trust and confidence, however, were no match for paleface

greed and run—and lo, we have the unique spectacle of the usually sedate Chickasaw becoming gloriously inebriated and raising all sorts and kinds of particular Cain with Madame Chickasaw and the “family.”

The white man did another unwise thing. He traded his guns to the poor Indian for furs and skins. Of course, Mr. Indian had to learn to shoot the “fire-sticks,” and with copper-colored suavity he proceeded to practice his markmanship upon the palefaces.

inal prodigal was received, and as none others have been received since. If business interferes with telling you of the merits of Memphis, they will give up their business, because they know that you, out of sheer gratitude, will dump it two-fold into their laps at the first opportunity. Didn't some one, at some time, somewhere, say something to the effect that the Memphis spirit was a germ that bit often and quick and flourished like a boll weevil? Well, that about sums it



An Uptown View of Memphis

Puff! Bang! Long-haired settlers with longer squirrel guns began to let their anger get the better of them, and before many moons Mr. Chickasaw was in the unique position of being ousted from his own happy hunting grounds and deported, so to speak, from Tennessee into Arkansas.

That is how the white man came to Memphis. He has been there ever since and he hasn't missed a day in adding to the beauty and endurability of the city.

The result! Ah, that is a thing of which Memphis is proud. The citizens will talk to you by the hour of it. They will welcome you as long lost brother and take you into the fold with the same spirit that the orig-

up, although the comparison isn't a very pretty one. The chances are that if you let an honest-to-the-Lord-bred-in-the-bone Memphian take you out sightseeing for an hour, that in less time than that you will be figuring on buying a five-room bungalow with hardwood floors and an open fireplace on a fifty-foot lot somewhere out at the end of a car line.

That is the way that the Memphis spirit gets you. And why does it?

Well, they have a Business Men's Club in Memphis, and it's a wonder. Its slogan is "For Memphis," and no two words ever said as much in less time than does that pair. It is "For Memphis," first, last and always, and

it has worked so hard and persistently that almost every one in this great big country knows just why Memphis is so proud of herself.

For instance: Did you know that Mem-

1913, 150,501. Estimated city directory population, 1914, 175,000.

Memphis has commission government and that, too, is saying a whole lot in a very few words. This is, without a doubt, the most



The Custom House at Memphis

phis in the past ten years has grown faster and stronger in population than any other city in the United States? Well, it has. Look at this table:

In 1880, Memphis had a population of 33,892; in 1890, 64,495; in 1900, 102,320; in

up-to-the-minute form of municipal management and the success of its method is shown by the fact that the city has far exceeded in improvement even the expectations of the men who promoted the plan.

Memphis has the lowest freight rates in and

out for any city within a given radius of miles. It has eleven trunk lines and they operate seventeen separate and distinct railroads. It is the home of 175 steamboats and the big stream is an eternal assurance of low rates.



Corn and "some punkins," grown around Memphis

The increased traffic through Memphis to the West has necessitated the construction of another magnificent bridge. It will be three miles long and will cost five millions of dollars. Three trunk lines will operate over it and an interurban route is also being planned to cross it.

Memphis has 206 miles of the finest paved streets in the South. Its parkways are adjudged the prettiest this side of the Ohio and many cities have sent their landscape gardeners here to study them. One hundred and twenty miles of street railway cover the city with a net work of tracks.

Memphis has been dubbed by one health expert as "The Nurse of the South." In times of high water or other misfortune the city is invariably the one that is first to the scene with relief trains. Owing to the immense amount of territory dependent upon it, the ten hospitals, large and small, more than have their hands full. Eight out of every dozen patients are from out of town. The best known of the hospitals are St. Joseph's, the splendid Catholic institution; the City

Hospital, a modern of sanitarium architecture and service; Baptist Memorial Hospital, the new and elaborate institution which has just closed its second year; the Presbyterian Hospital, one of the best known of the older institutions, and a half dozen or so of others.

The death rate in Memphis is only 9.03 per thousand, making her rank third to all American cities.

This is due in a large measure not only to the equitable climate, but to the magnificent waterworks and sewerage systems. The water is pure artesian, coming from an underground reservoir, and never seeing the light of day until it is drawn into the glass. The waterworks system is the largest and most complete in the South.

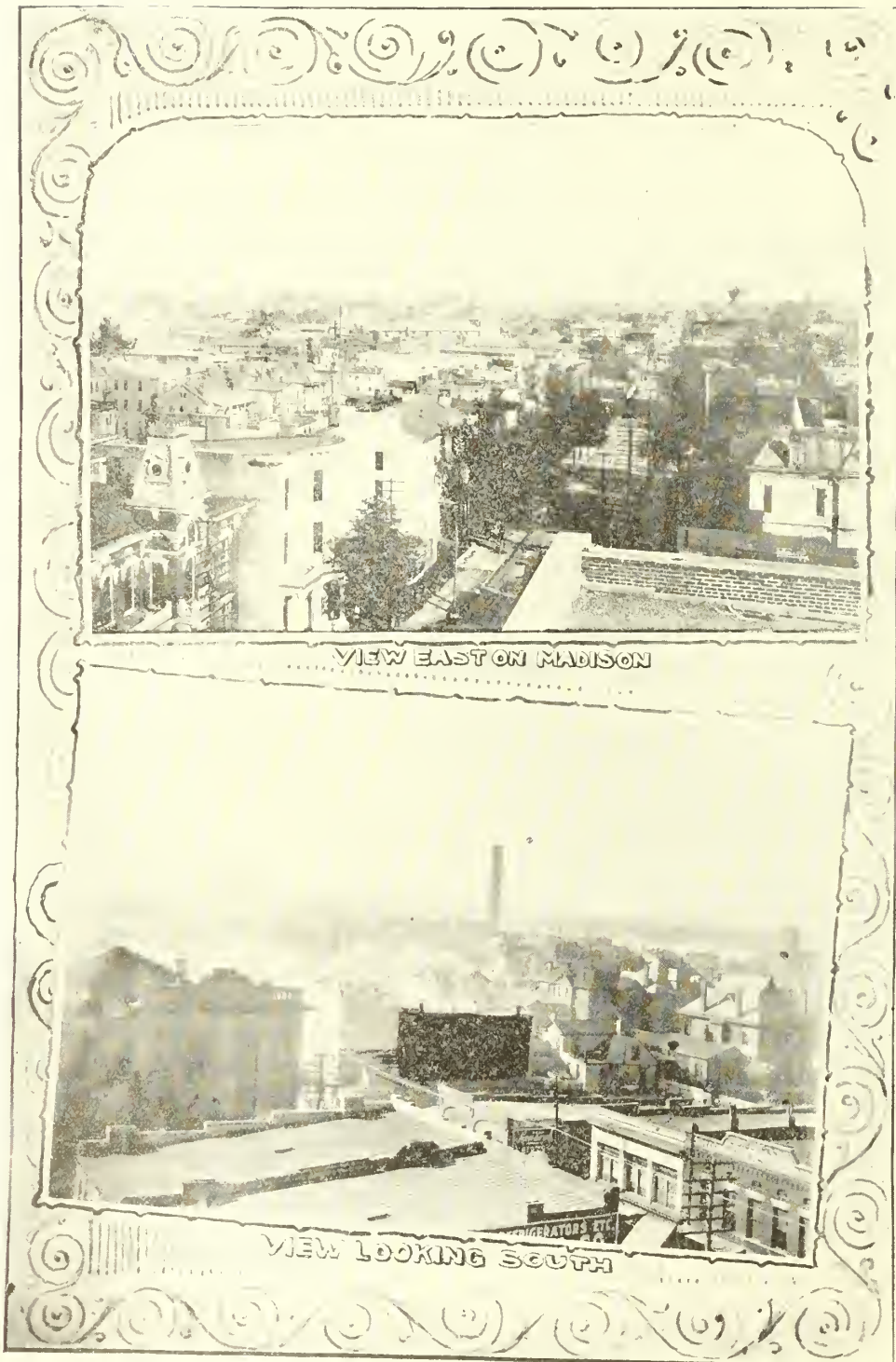
Memphis is the largest inland cotton market in the world, and has been for so many years that no one now ever takes the time to even dispute her claim. The Memphis dealers handle an average of one million per annum. On lumber of hardwood varieties, Memphis also holds uncontested claim. Her output is one billion feet a year.

Memphis has 600 industrial manufacturies,



Agricultural Committee, Business Men's Club

and her switching systems are municipally regulated so as to prevent excessive tariffs and discriminations. Three belt lines offer unlimited opportunities for excellent sites to new firms.



Two Typical Memphis Scenes

There are a hundred and one other things in which Memphis excels. Here are some of them as put forth by John M. Duthier, Secretary of the Business Men's Club. Read them. Fact is better than fancy, and figures more entrancing than fiction.

As a basis for its wonderful prosperity:

Has 150,501 of the best people on earth.

Has Commission form of government.

Has the Mississippi River, with perpetual deep water navigation.

Has only bridge crossing Mississippi River below mouth of the Ohio, and a second one under construction.

Has lowest freight rates in and out of any other city for any given radius of territory.

Has the best municipal regulations as to railroads in matters pertaining to switching



Home of the Business Men's Club

Has grown faster in population and wealth in the past ten years than any other city in the United States. Population: 1880, 33,892; 1890, 64,495; 1900, 102,320; 1913, 150,501.

Has eleven trunk line railroads, operating seventeen distinct lines in and out, having physical connection each with the other.

charges, car service, etc.

Has three belt lines, affording unexcelled factory and industrial sites within Memphis switching limits; with municipally controlled interchange switching, at lowest rates in the United States.

Has best distributing facilities of any city South or West.



Has the greatest advantages to foreign factories for storage and for distribution of goods.

Has more than 600 manufacturing industries.

Has ideal labor conditions and ample labor supply, both white and colored.

Has advantage over every other point as a cotton spinning center. On cotton products for distribution to the West and Southwest the saving in freight rates alone, as against New England points, amounts to \$5.60 per bale.

Has unexcelled advantages as a meat packing center; has three stock yards and one local packing house, and arrangements are completed for location of mammoth stock yards and packing houses.

Has more and better hotel accommodations than any other city of its class in America.

Has twenty-seven banks and trust companies, with \$9,000,000 capital and \$51,000,000 deposits.

Has the best and most influential newspa-

pers in the South, each devoted to the material advancement of this city and territory.

Has Business Men's Club. The mission of this club is to advance the industrial, commercial and material interests of Memphis and of the territory surrounding.

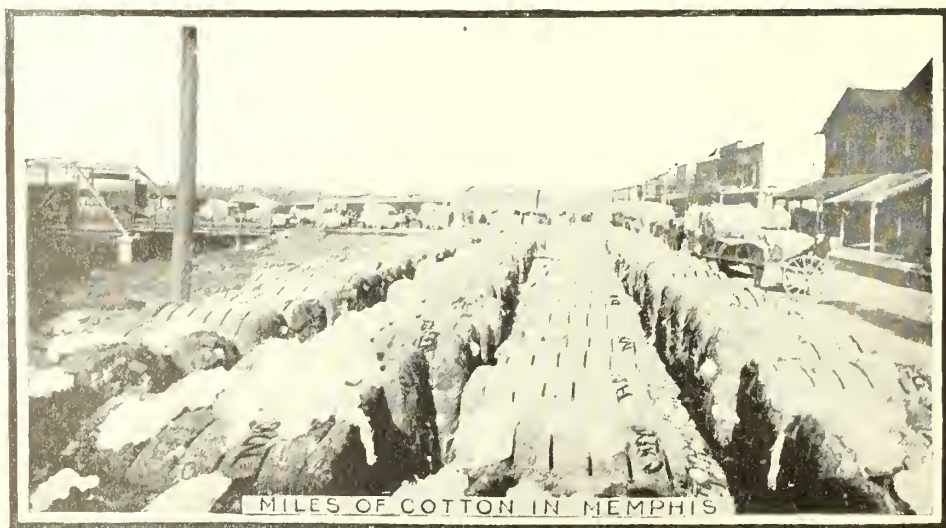
Has ten days' stop-over privilege on all through railway tickets.

Is the largest inland cotton market in the world, handling 1,000,000 bales per annum. (Memphis shipped cotton commands the highest price in all domestic and foreign markets.)

Is the largest hardwood producing lumber market in the world, handling in 1910, 670,000,000 feet. Total lumber output, 1,000,000,000 feet.

Is the largest producer of cotton seed products in the world.

Is alive to the necessity for more factories. Its citizens and the railroads pursue a liberal



Scene in one of the hundreds of cotton warehouses



policy toward industrials proposing to locate here, and to those already operating here.

Is government port of entry, having the finest custom house in the South.

Is the home port of 175 steamboats.

Is the third largest grocery jobbing market in the United States.

Is the best convention city in the United States.

Is located in a richer and more rapidly developing territory than any other city in the United States.

For the pleasure and comfort of her people.

Has 1,200 acres in improved parks, and has highly improved fair grounds, containing 111 acres.

Has 11½ miles parkway, 70 per cent being boulevarded, double roadway; \$1,000,000 additional will be expended on parks and parkways.

Has 206 miles improved streets, with \$3,000,000 to be expended in further improvements of streets in the next three years.

Has 800 miles standard macadam county turnpikes, having more improved mileage than any other county in the United States.

Has 120 miles electric street railways.

Has the largest and most complete zoological garden in the South, containing 1,100 interesting specimens.

Has the best water used by any American city, supplied by the largest artesian water system in the world.

Is located on river bluff, the entire city being 50 feet above highest water mark.

Has the best and most equable climate in America.

Has exceptional health, with death rate of 9.03 per 1,000, making her rank third of all American cities.



Rice Mill, a new Memphis industry

Has the model sewerage system of the world, with perfect surface drainage.

Has 32 schools, colleges and seminaries; 6 business colleges, 2 medical colleges, 10 hospitals, 3 public libraries, with a \$650,000 newly constructed Industrial High School building, and \$1,000,000 State Normal School, now building. Has three departments of Univer-

sity of Tennessee.

Has the finest and handsomest court house in America.

Has just completed a union passenger station, at a cost of \$3,500,000.

Has 157 churches.

Has 5 regular theaters, 30 popular-priced theaters, and 3 park theaters.



Memphis Police Headquarters

Prospectus of "A Day in Memphis"

So, you want to visit Memphis! You want to see the City of Wonders! Suppose we take the day off and come to Memphis! It's well worth while, and when it is done you will mark it down in your Life Book as a day well spent—an event to think and talk of in the years that are yet to come.

Do you remember the story of the Roman youth who, when his evenings mellowed into night, would place a black stone in an urn for every day that was well spent? He was a wise chap, that youngster, and had he been fortunate enough to have come to Memphis, he would have probably lifted a boulder of gigantic size into that urn of his. His trip to Memphis would have stood out over everything else, it would have overshadowed the chariot races, made of small consequence the battles of the gladiators, dwarfed into insignificance

the fete days of the empire, and caused him to wonder and to marvel for evermore.

Well, here you are! You stand, so to speak, upon the threshold of the city. An early morning train has brought you through the fertile valley land—the richest country in all the world, an inland empire famed even unto the islands of the Seven Seas for its productiveness and wealth. And now here you are in one of the two great railroad terminals, imposing piles that rise majestically as the gateways of a great city should. They are the latest word in terminal construction, these railroad stations, and in all the land there are none that are more complete even in cities of double the size.

Here the wants of the traveler are given every consideration. They are small cities

within themselves. They have their own telephone systems, scores of telegraph lines run into them, there are restaurants, barber shops, book stores, candy shops, cigar stands, information bureau, where one can inquire the time that a train will leave Hong-Kong, China, on a certain day and be told even unto the minute. That is what efficiency in a Memphis railroad terminal means.

You have paused only a moment here, and yet a half dozen boys have tried to relieve you of your parcels or luggage, while agents for taxicab and transfer companies are besieging you on every side. Step to the front, please! Follow the crowd. Ah, you are out upon a busy street and as irresistibly as if you had been drawn by a magnet you find yourself boarding a street car and on your way uptown.

Time forbids of any lengthy stops from now on. You are here to see Memphis, and you are going to see it in one day. It will be a day crowded with incidents and surprises—it will be four days, a week, two weeks condensed into one day.

Here we are at Main and Madison. The car has made its way through the travel and traffic of Main Street—the Broadway of Memphis. Perhaps you wonder at the apparent ease with which the street's flow of life is regulated. At times almost directly ahead it looks as if the thoroughfare is congested, but at each corner there stands a stalwart guardian of the law—this is one of the innovations of modern city regulation, the Traffic

Squad. As the white-gloved hand of the officer raises, the traffic across the thoroughfare on the avenue stops. The car passes. You hear his shrill whistle and again the flow of a busy city's street movement is resumed.

Main and Madison.—To the north and south stretches Main Street; to the east and west is Madison Avenue. You see here you have the keynote of the Memphis plan of street designation. All running east and west are called avenues; all north and south are streets. So here is Madison—an avenue that is rivalled only by Wall Street in New York and State Street in Chicago. It has often been called the Wall Street of Memphis. Here are the banks—great, strong financial institutes that handle millions of dollars yearly. Their homes range all the way from the towering skyscraper to the distinctive marble palace—the acme of exclusiveness.

Madison Avenue was the first of the Memphis white ways. Like a chaplet of beads the hundreds of standard group globes burn their way into the darkness after nightfall and make the street so bright that a pin can be picked up.

Main Street is now the proud possessor of a white way, and it is said to be the longest in the entire country, surpassing in brilliancy even that of the much-heralded Broadway.

Just off Main Street, on Monroe Avenue and looking towards the river, you will see a big sign, "For Memphis," on a handsome brick building. This is the Business Men's Club, the throbbing heart of the great com-



A Typical Memphis Brick Plant

mercial city. Here the interests of the town from an industrial and civic standpoint are cared for by an organization that is acknowledged by commercial institution experts the country over to be a leader.

C. O. Scholder is President of the Business Men's Club and John M. Tuther is its General Secretary. The club is a handsomely appointed building, and by applying for a card from the Secretary you are privileged to inspect it from boiler room to roof.

Court Square.—It is just a short block from Main and Madison and one of the most wonderful spots in the nation. Here great flocks of pigeons make their homes and the timid squirrels have been so petted and pampered that they have become quite bold and will not hesitate to pick one's pocket for any delicacy that the wily little rascals might suspect you have. With the possible exception of St. Mark's in Venice, Court Square has no rival.

One block west from Court Square is Confederate Park with its battery of old guns as grim reminders of the great inland naval battle that was waged off this point half a century ago. Several of these cannon are said to have been among the largest used by the Confederate army. The spot is now a beautiful park—one of the smaller ones of the great Memphis park system.

The view from this point is unexcelled. To the north is the great bend famous in Indian legends as one of the most magnificent on the river. Nowadays, however, the Indian legend has given away to commercial growth, for across on the point that juts out into the swift current freight engines are busy handling their strings of cars. Quite a clash between the primeaval and the modern, or the artistic and the prosaic, eh! But then business is no respecter of traditions, and so the Indian camping ground of old has given away to a freight yard.

To the South stretches the skeleton-like length of the great Memphis bridge—acknowledged in every land as one of the most remarkable engineering feats of that day. Time was when this bridge was considered more than sufficient to handle all of the traffic between the two coasts, but Memphis and the Inland Empire, of which she is the capital city, has grown so fast that another bridge

is now under construction—a five million dollar project that will far overshadow any span along the entire length of the great Father of Waters. This bridge will have an inter-urban trolley service, double railroad tracks, pedestrians' walks, and a free wagon way.

One end of this great span will rest upon the spot where DeSoto is said to have stood when he led his small but noble band of discoverers to the banks of the mighty Fathers of Waters. And so this five million dollar monument to J. T. Harahan, the man who headed the first company to finance it, will also be a memorial to DeSoto.

Now let's walk back to Main Street. From the Square we will go three blocks north to Adams and then one east.

Here you are given an insight into a real civic center. The first building, the two-story white stone structure, is the new fire headquarters with its motor apparatus and the latest and best of everything for fighting what a big city fears worst—fire.

Adjoining is a building that looks like a library or bank, so imposing does it stand. This is the finest police headquarters in the world—a model of perfection of arrangement, sanitation, usefulness, strength and beauty.

Across the street, covering an entire city block, is the famous Shelby County Courthouse, a building that has won the plaudits of the lovers of artistic the world over. Probably nowhere else is there a Temple of Justice that in its very construction looks so impressive and dignified as this great example of old Roman architecture. Its marble pillars, great statues and long corridors all combine in delighting the eye. Here the Mills of the Gods grind out justice, and here, too, the Mayor of this great city and his army of employes have their headquarters.

The church down the avenue is St. Peter's. In reality this building is a cathedral, massive and inspiring—the oldest Memphis church, beautiful of interior with its gold-embazoned figures and scenes—revered by Catholics and Protestants alike as hallowed ground upon which many stirring events of the city's life have transpired.

Time is speeding and we must hasten on. Suppose we take a suburban South Memphis car and go out to the big cotton warehouse—



The Scottish Rite Cathedral

the greatest and most complete on the face of the globe. It is a scant twenty minutes' ride. Here the city lines of the Memphis Street Railway Company connect with the Lakeview division, which has a direct route into the heart of Memphis.

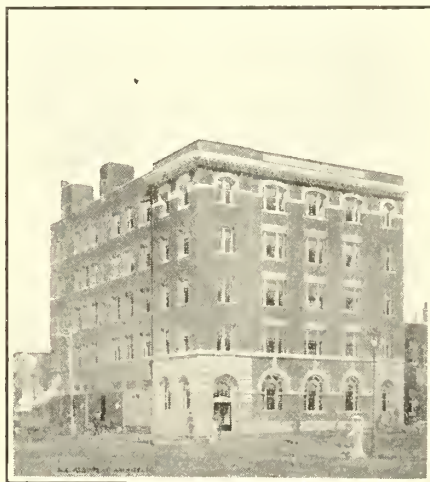
At the entrance of the warehouses we are stopped by a guard, who politely asks us to leave all matches, cigars, cigarettes with him. You see this gigantic plant has by its careful methods cut the fire hazard down to such a minimum that it is accorded the lowest insurance rate in the world on a warehouse.

We are inside. It looks like some great fort with its row after row of white concrete walls. All about it there is activity. But, strange to say, there is no cotton in sight.

Ah, there it is! You didn't expect to see it that way, did you, hanging suspended from a rail—ten, twenty- thirty, maybe a hundred bales of it being pulled along by one little, insignificant-looking mule. But the mule isn't pulling it at all—he's merely helping it over the rough places, so to speak. A guide takes us through this plant. He shows us the compartments in which the cotton is stored, each one of them holding enough of the fleecy staple to pay the ransom of a king. "Pick out any bale of this and in five minutes we'll hand you its record—how long it's been here,

where it came from, where it is going, its grade, who owns it, and even down to the identical freight car it came in," he tells us. Then we are shown the fire system—an intricate and yet simple system where the flash of light and the clash of a gong tells the fire-fighting force that a blaze has broken out. So far, it is said, this plant has kept its loss down to a point where it is absolutely insignificant. In fact, it is said that it would be impossible for a fire to get a good start here.

You could spend a day or two in studying this plant and find a plenty for marvel, but



Home of a Prosperous Memphis Firm

remember you agreed to take up only one day in all of Memphis. Before we go look off to the south and you will see a rice mill in full operation—a mill whose only trouble is in working long enough to fill a demand that is always crying for more. Rice is a new industry around Memphis, but despite its youth it is a giant in size. Some of these days it will rank with cotton, it is said.

We will again get a car and go back towards town. But not all of the way in. At Iowa Avenue we will transfer to another suburban car, this time a Florida street division, and we are off for the stock yards. Here, too, Alladin has rubbed his lamp and, behold, almost overnight there sprang up from a bare plain an immense plant that is some wonder, even to the finest detail and has already made Memphis the greatest horse and mule market in the world. Here 1,000 head of stock are sold weekly. And they are well cared for, too, brick stables, perfectly ventilated, concrete floored, fire protected, running water, and every convenience that a thoroughbred can expect.

On the way back into town we pass through a magnificent industrial center. Great buildings, manufacturies, distributing depots, and numerous small factories are on every side. Then, too, there is the new gas plant, with its great vats that contain enough gas fuel to last the city a week.

We are already skimming through town. We will transfer to a Poplar Avenue car now and run out to Overton Park. Beautiful residences line the way, stately old Southern homes with acres of ground around them. Poplar Boulevard, wide, flawlessly paved, and above all well kept, is a fair example of Memphis streets. There are no finer in the country.

It is a thirty-minute jaunt to Overton. Imagine your surprise when you run from a residence section straight out into the virgin woods. Tall oaks line the way, eypress, elm, weeping willow, hickories, in fact every kind of tree is found in this great tract, which, except where the roads have been cut through it, is just as it was in the days when the Indian braves of the long rifle armed pioneers brought down the great, great, great-grandparents of the squirrels which now scamper around in the underbrush and foliage.

Ah, we are at the Zoo! Nestled down in a pretty stretch of woodlands the pretentious buildings greet one as a new surprise. No mystery now as to why Memphis is called the City Wonderful, is there? This is the largest free zoo in the world, with but one exception, and the exception is the Bronx, New York. The Cincinnati zoo may be larger, but you pay to visit it.

Here we have every kind of animal from the stately and ferocious lion down to the insignificant and yet highly amusing baby monk. Birds of all climes and plumage prune themselves in the sun and splash about in the ponds. An elephant from India trumpets a thunderous answer to the screeching challenge of the owl.

You don't want to leave? Well, can't blame you much, but remember you have only a day. Let's go. Out to the north of the zoo you are given a glimpse of the great parkway, said by landscape gardeners to be one of the most magnificent in the country. It circles the city like a great belt, and it is over fifteen miles in length.

Over to the east of Overton is Binghamton, the industrial suburb of Memphis. Here are located the American Car & Foundry and other big plants furnishing employment to a host of skilled workmen.

Suppose we walk to the south. That will give us an opportunity to see the playgrounds, the wading pool, the lily lake, the golf links, the dancing pavilion, the pergola, and the ————— Memorial. Your attention is especially called to the golf links. This is one of the finest fourteen hole courses in the South, and it is as free as the air that you breathe. Over on the knoll near the landstand will be erected the Brook's memorial, a museum in which will be hung fine paintings and statuary will be preserved in order that our children's children may see the works of art that we admired.

We are at the Poplar Avenue entrance in less time than it takes to tell. If you wish we can walk along one of the driveways through the woods that are pretty in winter, cool in summer and wondrously beautiful when autumn trims them into the multitude of colors that only nature can blend. In ten minutes or so we will strike the parkway again.

Three blocks to the south is the great Tri-State Fair Grounds. Suppose we spend a few minutes there. It is getting along towards late afternoon, but nevertheless you can't see Memphis without visiting the fair grounds. This is the famous old Montgomery track, where many a famous runner has caused the great grand stand to shake and creak under the thunderous applause as he shattered a new speed record. Now the day

On the way in we will pass East End Park, which is the White City of Memphis, the Baptist Memorial Hospital, said to be one of the finest in the country; the City Hospital, where Memphis takes care of the ill, rich man and the pauper, with equal care; the University of Tennessee Medical Department, and Forrest Park. In this park, which is one of the prettiest of the small recreation grounds is a magnificent equestrian statue of the peer-



The Magnificent Union Station

of the thoroughbred, except for the classy pacers, is passed and Memphis has the Tri-State Fair instead. The city bought this park from its owners and turned it over for a municipal playground and fair site. Memphis is one of the few cities in the country owning her own fair grounds. The buildings, now of frame, will soon be replaced by the more substantial stone structures.

Here the South's greatest live stock show is held annually, and here also the Tri-States every year send the very best of their products and public acclamation has elected them the very best that there is anywhere.

We'll board an East End inbound car here. It is a half hour ride back into town.

less Southern leader. The figure of man and mount are superb, in fact they seem to be living and breathing instead of inate bronze.

Now for the last leg of the journey. Suppose that we take a North Second Street car. That will bring us into the very center of the lumber district. And lumber, be it known, is second only to cotton in the making of Memphis. This is admittedly the greatest hardwood lumber market in the world.

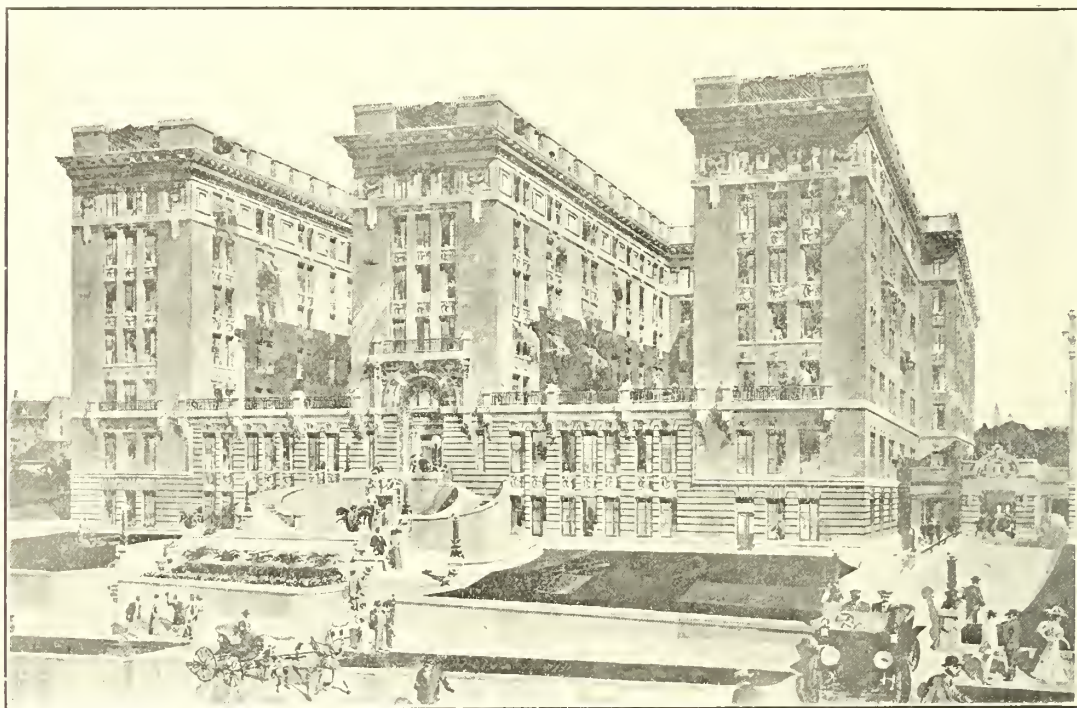
On the way out we will pass the main pumping station of the Memphis Artesian Water Company. It will take only a few minutes to go through it. Without a doubt this is one of the most unique plants of its kind in the country. Here pure artesian wa-

ter at the rate of gallons a day is pumped into the mains and sent to every part of the city. This water comes from hundreds of feet below the surface and does not see even a ray of sunshine until it is put into the glass from which you drink it. So plentiful is this water that it is used in even flushing the streets, and Memphis claims the distinction of being the only city on record that can afford this luxury.

At the end of the car line we can go

great arms into the night, and high above you many colored lights, thousands upon thousands of them, burn into the blackness—the flaring story of a great city's commercial energy and wealth.

Pick your hotel. Memphis has them in all sizes. If you wish the Bohemian, it will take only a moment to find it; if you seek the quiet of a family establishment, there are many at hand; but if you want the music, the laughter, the song, the dance—ah, Memphis



Baptist Memorial Hospital

through any one of the great lumber plants and see the mill cut a log into a piece of furniture or grind it into a pulp for use in making fibre materials. Memphis lumber goes to all parts of the world.

Tired? Just a little. Who wouldn't be? You have covered probably fifty miles or so on your jaunt and now on your way back to town you can well realize that seeing Memphis in a day is a question of moving every minute.

It is evening and you will probably enjoy dinner at one of the hotels. The streets that you left busy and crowded in the full flush of a day are now transformed into magic brilliance. The "White Ways" stretch out like

has that, too, and the Tango tea and the cabaret.

And so you suit your taste, and then probably if you will remain until a late train you can see a show. There is vaudeville and the best of it, drama or comedy—the latest plays as straight from Broadway as wise booking agents can bring them.

So you have seen Memphis. Not all of it, it is true, but enough to convince you that Memphis is indeed a city for you to be proud of it. "Queen City of the Valley" they have called it, and in the calling they were right, for none other disputes her title. "The City Magnificent" a great man named it, and in doing so he displayed the good judgment of

his greatness. "The City Historical" a poet characterized it, and when he did so he remembered DeSoto, Forrest and the others of lesser fame. "The City Wonderful!" Ah, that is it—strong, hospitable, truly great—such is Memphis.

Again you are at the Terminals and the Pullman berth or the soft day coaches will be welcome to you, for you have had a strenuous day. And if the rumble of the speedy train lulls you into sleep you will dream—well, of what else could you possibly dream, let me ask?—but of Memphis, The Wonderful.

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE.

The University of Tennessee College of Medicine is the result of the following consolidations and mergements: The consolidation of the Medical Departments of the University of Nashville and the University of Tennessee, which were separately maintained at Nashville until 1909; jointly conducted by the two universities from 1909 to 1911, inclusive; in 1911 the University of Nashville formally named the University of Tennessee its legal successor in medical teaching, transferring to the latter all of the medical and hospital equipment held by the former or jointly owned by the two; the University of Tennessee College of Medicine merged the College of Physicians and Surgeons in 1911 and occupied the buildings and grounds of that college; in 1913 the Memphis Hospital Medical College merged with the University of Tennessee College of Medicine.

The College of Medicine occupies the following buildings in Memphis: One on Madison Avenue, opposite the Memphis City Hospital, and alongside the Baptist Memorial Hospital, this building being known as Linsley Hall, so named in honor of Dr. J. Berrien Lindsley, son of the first president of the University of Nashville and the organizer of the Medical Department of the University of Nashville in 1850; another building on the same campus, but fronting on Monroe Avenue, known as Eve Hall, so named in honor of Dr. Paul F. Eve, Sr., one of the organizers of the Medical Department of the University of Tennessee in 1876; a third building at the intersection of Union and Marshall Avenues, known as Rogers' Hall, so named in honor of Dr. William E. Rogers, the organizer of the Memphis Hospital Medical College in 1878.

The Trustees of the Memphis City Hospital have provided for a Medical Board to which

they have delegated the control of the medical and sanitary affairs of the Hospital. The Medical Board regulates the admission, diet and discharge of patients, and the appointment of interns; appointments to the Staff are made by the Board of Trustees solely on its recommendation.

The Medical Board consists of three members of the Staff of the Hospital, who are appointed by the Dean of the College of Medicine of the University of Tennessee. All members of the Staff for the winter term (extending from September 15th to May 15th), are selected from the faculty of the College of Medicine.

After January 1, 1914, one year of college work in Physics, Chemistry, Biology and German or French will be required for admission to the first year of the medical course proper.

Beginning September 22, 1913, both at Knoxville and at Memphis, a preliminary year in those subjects will be offered.

ST. JOSEPH'S HOSPITAL.

Twenty-five years ago this month there came to Memphis a company of six Catholic Sisters, members of the Order of St. Francis; which order is devoted to hospital work and the care of the sick. They established themselves in a small frame building which then stood on a part of the present site of the great institution, which has since been developed out of their modest efforts. Up to that date the hospital facilities of Memphis had been represented by a group of miserable and inadequate shacks which, together, were known as the City Hospital, long since demolished. The time was ripe for an enterprise of the character which the good Sisters proposed to develop. Without ostentation and with the assistance of a few public-spirited citizens and the advice of the late Father Francis, a modest beginning was made in the shape of a dozen or so of beds, free for the use of the indigent sick; and such other departments as were necessitated by the character of the venture.

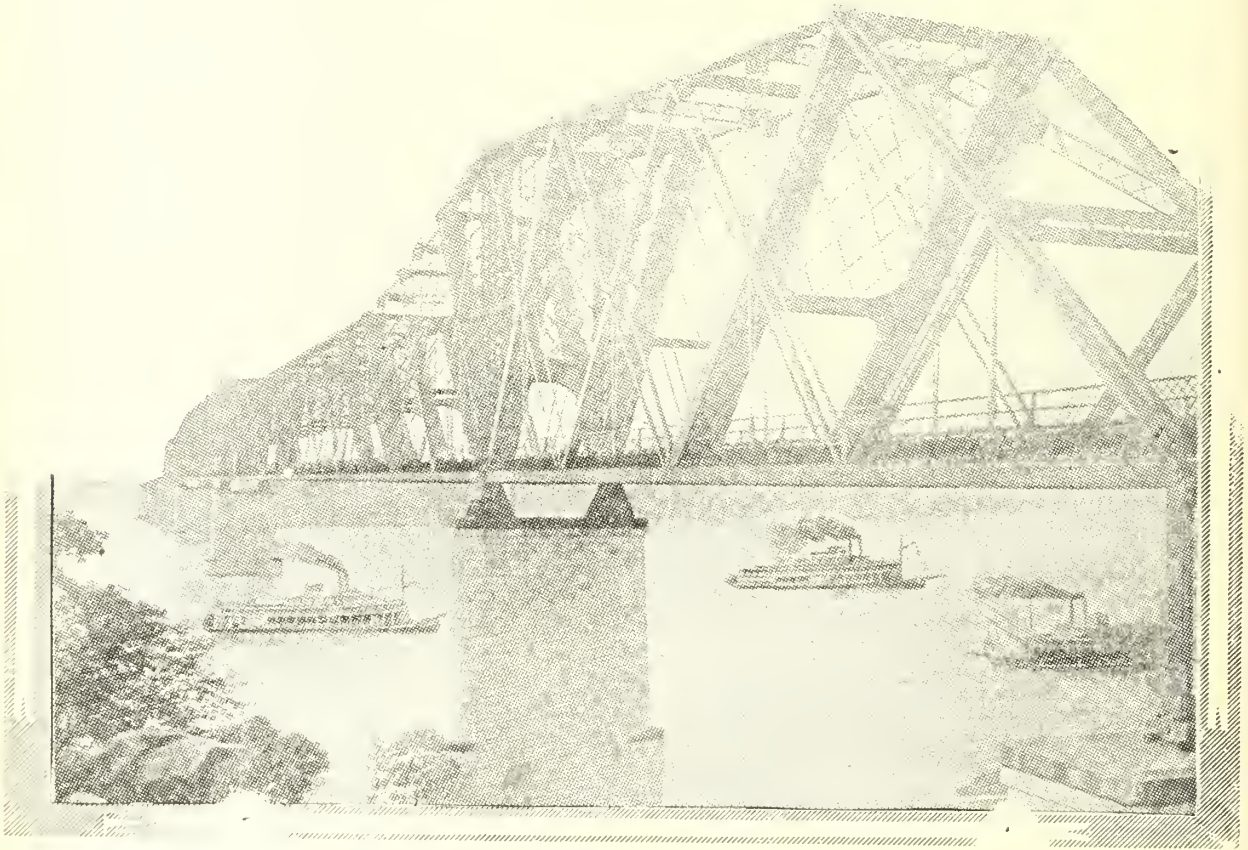
From its incipency all who were in need of such service as such an institution supplied were made welcome. No distinction of sex, age or creed was made. Those who were able to pay for the services rendered to them were charged in proportion to their ability to pay. But especial effort was made to supply the crying need of those who were penniless and had nowhere else to go to secure such care as sickness demanded.

As time passed and the resources of the in-

stitution increased, more space, contiguous to the original accommodations was secured and buildings were erected as the growing necessities of the hospital demanded, until at the present moment the hospital grounds comprise property fronting some 400 feet on Jackson Avenue, and are of a depth of about the same dimensions. And upon this property stands a dignified brick structure which represents an outlay of approximately \$150,000,

the most recent advances have suggested are available.

Not only the residents of the city of Memphis, but also those of a district surrounding the city for a distance of a hundred miles in every direction avail themselves of this institution. There still remain within its walls three of the original group of devoted sisters whose unselfish and untiring efforts have brought so rich a fruition to the once modest



Span Across the Mississippi at Memphis

adapted to the care of about 250 sick. Of this gross capacity about 100 beds are devoted to the care of the indigent; the remainder to the care of such as can afford the luxuries pertaining to the sick room.

Every modern appliance and accessory adapted to the most scientific care of the sick has been secured and is applied to rich and poor alike. The building is perfectly lighted, heated and ventilated. There are numerous operating rooms, electrotherapeutic appliances, laboratory and photographic facilities. Indeed, every therapeutic accessory which

enterprise. And well may they, as well as the citizens of their adopted home, contemplate with satisfaction the visible result of their devotion to the needs of the friendless. Surely there awaits for them in due time the welcome commendation of Him who shall say "I was hungry and ye fed me; thirsty and ye gave me to drink; naked and ye clothed me; sick and ye visited me. Enter thou into the joys of thy Lord." For this is what they have been doing right here in our midst the past twenty-five years, and will continue to do for many a year to come.

OFFICIAL PROGRAM, MEMPHIS MEETING

HOUSE OF DELEGATES

The House of Delegates will meet at 8 to 9 a. m. and at 2 to 3 p. m. each day until the work is finished, so as to give delegates an opportunity to attend the scientific proceedings so far as consistent with their duties; but if the business of the Association requires, it may meet in advance or remain in session after the final adjournment of the general meeting.

General sessions will be held in the Chisca Hotel.

The opening session will be called to order at 10 a. m., Tuesday, April 7, by Dr. Richmond McKinney, Chairman of the Committee on Arrangements. The general public is most cordially invited to this session.

Members are urged on reaching the hall of meeting to register at once at a desk convenient, where they will receive their badges.

Members of the House of Delegates, or their alternates, on arrival, will at once present their credentials to the Secretary, that they may receive the proper badge.

Arrangements for Alumni Reunions should be made so that they will not conflict with the Scientific Program.

Tuesday, April 7, 10 a. m.

1. "The Drug Habit in Tennessee from the Viewpoint of an Enforcing Official,"
by Lucius P. Brown, M.D., Nashville.
To open discussion; George E. Petty, M.D., Memphis.
2. "Chronic Appendicitis," by R. A. Barr, M.D., Nashville.
To open discussion; F. D. Smythe, M.D., Memphis.
3. "Pistol Wounds of the Brain, with Report of Two Cases," by Jere L. Crook,
M.D., Jackson.
To open discussion; Duncan Eve, M.D., Nashville.
4. "Food Intoxications of Childhood," by O. W. Hill, M.D., Knoxville.
To open discussion; A. F. Richards, M.D., Sparta.

Tuesday, April 7, 2 p. m.

5. "Inflammatory Stricture of the Oesophagus," by Richmond McKinney, M.D.,
Memphis.
To open discussion; Hilliard Wood, M.D., Nashville.
6. "Demonstration of the Recently Discovered Micro-Organism of Hodgkins
Disease (*Corynebacterium Granulomates Maligni*)," by Wm. Litterer,
M.D., Nashville.
To open discussion, William Krauss, M.D., Memphis.
7. "The Runabout Baby," by W. N. Lackey, M.D., Gallatin.
To open discussion, James H. Atlee, M.D., Chattanooga.

Special Order for 3 p. m.

(Special address.)

8. "Arterio-Sclerosis of the Cerebral Vessels," by John Phillips, M.D., Cleveland, Ohio.

To open discussion, Heber Jones, M.D., Memphis.

9. "Bone Transplantation with Report of Case," by E. T. Newell, M.D., Chattanooga.

To open discussion, J. F. Gallagher, M.D., Nashville.

10. "Gastric Ulcer," by J. B. Thielen, M.D., Knoxville.

To open discussion, Miller Woodson, M.D., Gallatin.

11. "Report of Some Interesting Cases of Abdominal Surgery," by C. P. Fox, M.D., Greeneville.

To open discussion, Raymond Wallace, M.D., Chattanooga.

12. "Tonsilectomy Versus Tonsilotomy," C. B. Jones, M.D., Knoxville.

To open discussion, O. Dulaney, M.D., Dyersburg.

Tuesday, April 7, 8 p. m.

Public Invited.

(Presidential Address.)

13. "Present-Day Problems of the Medical Profession," by W. D. Haggard, M.D., Nashville.

(Special address.)

14. "When Should Gastric Ulcer be Treated Surgically and When Medically," by Bertram W. Sippey, M.D., Chicago.

(Special address.)

15. "The Cancer Problem," by Joseph Colt Bloodgood, M.D., Baltimore.

Wednesday, April 8, 9 a. m.

16. "The Factors Necessary to Make Correct Surgical Diagnoses; Some Clinical Cases Illustrative," by E. D. Newell, M.D., Chattanooga.

To open discussion, Elizabeth C. Kane, M.D., Memphis.

17. "Pudendal Hematocele," by J. M. Clack, M.D., Rockwood.

To open discussion, F. T. Runyon, M.D., Clarksville.

18. "Means of Resuscitation in Anesthetic Fatalities," by E. M. Sanders, M.D., Nashville.

To open discussion, W. N. Lynn, M.D., Knoxville.

19. "Placenta Previa," by J. S. Campbell, M.D., Gordonsville.

To open discussion, J. D. Alexander, M.D., Tiptonville.

20. "Treatment of the Several Stages of Trachoma," by G. C. Savage, M.D., Nashville.

To open discussion, E. C. Ellett, M.D., Memphis.

21. "Pneumonia," by D. A. Walker, M.D., Friendship.

To open discussion, W. S. Farmer, M.D., Cookeville.

Wednesday, April 8, 2 p. m.

22. "The Present Status of Blood Pressure," by F. A. Jones, M.D., Memphis.
To open discussion, W. H. Witt, M.D., Nashville.
23. "Abortion, with Report of Case," S. B. Duggan, M.D., Eagleville.
To open discussion, M. A. Blanton, M.D., Baileyton.
24. "Elliot Trephine Operation for Glaucoma," by Hilliard Wood, M.D., Nashville.
To open discussion, Louis Levy, M.D., Memphis.

Special Order for 3 p. m.

(Special address.)

25. "Brain Abscess—Its Etiology, Diagnosis and Treatment," by J. O. Reik, M.D., Baltimore.
To open discussion, A. W. Harris, M.D., Nashville.
26. "Gall Bladder Diseases," by J. Hugh Carter, M.D., Memphis.
To open discussion, C. A. Abernathy, M.D., Pulaski.
27. "Sterilization," by S. M. Miller, M.D., Knoxville.
To open discussion, W. B. St. John, M.D., Bristol.
28. "Cancer of the Breast," by C. Holtzclaw, M.D., Chattanooga.
To open discussion, H. M. Tigert, M.D., Nashville.
29. "The Significance and Mismanagement of Acute Abdominal Pain," by L. L. Sheddan, M.D., Knoxville.
To open discussion, J. A. Crisler, M.D., Memphis.
30. "The Serum Diagnosis of Gonorrheal Infections" (from the laboratories of the Nashville Board of Health), by R. L. Jones, M.D., and Irving Simons, M.D., Nashville.
To open discussion, W. H. Cheney, M.D., Chattanooga.
31. "Treatment of Amoebic Dysentery," by O. N. Bryan, M.D., Nashville.
To open discussion, F. B. Reagor, M.D., Shelbyville.

Wednesday, April 8, 8 p. m.*Banquet by Shelby County Medical Society—Chisca Hotel.***Thursday, April 9, 9 a. m.**

32. "Some Sugestions for a Change in the State Law Governing Expert Testimony," by S. T. Rucker, M.D., Memphis.
To open discussion, S. R. Miller, M.D., Knoxville.
33. "The Necessity of the Wassermann Reaction in Controlling the Treatment of Syphilis," by Herman Spitz, M.D., Nashville.
To open discussion, Joseph L. Edwards, M.D., Brownsville.
34. "Treatment of Surgical Tuberculosis," by W. A. Bryan, M.D., Nashville.
To open discussion, W. C. Campbell, M. D., Memphis.
35. "The Use of Hyoscin—Morphine and Novocaine as Anæsthetics in certain Selected Surgical Cases," by J. A. Crisler, M.D., and E. J. Johnson, M.D., Memphis.
To open discussion, J. A. Gaines, M.D., Nashville.

36. "Goitre," by C. N. Cowden, M.D., Nashville.
To open discussion, A. G. Kern, M.D., Knoxville.
Report of Nominating Committee, 11 a. m.
37. "Pain in the Abdomen," by E. Winters Mabry, M.D., Gainesboro.
To open discussion, Robert Mann, M.D., Memphis.
38. "Inguinal Hernia," by W. B. Russell, M.D., Jackson.
To open discussion, W. T. Black, M.D., Memphis.
39. "Malaria and the Country Practitioner," by Hy Lockhart, M.D., Coalmont.
To open discussion, Ambrose McCoy, M.D., Jackson.

Thursday, April 9, 2 p. m.

40. "Cancer of the Uterine Cervix," by John M. Maury, M.D., Memphis.
To open discussion, A. L. Sharber, M.D., Nashville.
41. "Suprapubic Prostatectomy, with Report of Cases," by Geo. R. Livermore, M.D., Memphis.
To open discussion, J. W. Handley, M.D., Nashville.
42. "Blastomycetic Dermatitis Involving Eyelids," by Marcus Haase, M.D., and Robert Fagin, M.D., Memphis.
To open discussion, Howard King, M.D., Nashville.
43. "Remarks on the Accessory Sinuses of the Nose, with Lantern Slide Demonstration," by W. L. Simpson, M.D., Memphis.
To open discussion, M. M. Cullom, M.D., Nashville.
44. "Induced Pneumothorax in the Treatment of Pulmonary Tuberculosis," by Bryce W. Fontaine, M.D., Memphis.
To open discussion, W. C. Officer, M.D., Monterey.
45. "What Constitutes Conservatism in Pelvic Surgery," by Raymond Wallace, M.D., Chattanooga.
To open discussion, F. D. Smythe, M.D., Memphis.
46. "Carcinoma of the Breast," by L. W. Haskell, Jr., M.D., Memphis.
To open discussion, Robert Caldwell, M.D., Nashville.
47. "Iodine in Diseases of the Cornea," by J. T. Herron, M.D., Jackson.
To open discussion, Richmond McKinney, M.D., Memphis.
48. "Some Advances in X-Ray Therapy," by W. S. Lawrence, M.D., Memphis.
To open discussion, J. M. King, M.D., Nashville.
49. "Nasal Sinus Operation—Illustrated," by J. McChesney Hogshead, M.D., Chattanooga.
To open discussion, Walter Dotson, M.D., Gallatin.
50. "Some Observations on the Etiology and Treatment of Corneal Ulcers," by A. C. Lewis, M.D., Memphis.
To open discussion, George Price, M.D., Nashville.
51. "Treatment of Clubfoot—Report of Cases, with Lantern Slide Illustrations," by Willis C. Campbell, M.D., Memphis.
To open discussion, R. W. Billington, M.D., Nashville.
52. "The Cancer Problem," by M. Goltman, M.D., Memphis.
To open discussion, E. E. Reisman, M.D., Chattanooga.

THE JOURNAL

OF THE

TENNESSEE STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Tennessee

Office of Publication, Jackson Building, Nashville, Tenn

APRIL, 1914

EDITORIALS**MEMBERS, LAST NOTICE!**

As much as we regret to do so, we shall be compelled to drop all members whose dues have not been paid and reported to this office by April 1st. Now, doctor, no doubt you have overlooked this little, trivial matter, and your Secretary is waiting on you before he sends in his report. For that reason let us again urge you to give this your attention NOW, and relieve us of the very disagreeable duty of dropping your name, and of notifying the American Medical Association that you are no longer in good standing.

THE MEMPHIS MEETING.

The 1914 meeting is now close at hand. Elsewhere in this issue we have devoted considerable space descriptive of the Bluff City and its surroundings, most of which, no doubt, is already more or less familiar to the profession of the State, but it may serve as a pleasant reminder of some of the attractions awaiting you.

The meeting will be held in the new Chisca Hotel, where the arrangements are unusually complete and convenient for the purpose, being very spacious and with room to accommodate all who attend, besides being centrally located and convenient to the business and theatre districts of the city.

The program, while not complete at this writing, promises to be full and unusually rich, both in quality and variety. The subjects, announced elsewhere in this issue, and the personnel of the essayists are sufficient guarantee of the excellence of the treat in store. The distinguished visitors who appear upon the list are certain to bring messages which none can afford to miss hearing.

The local Committee of Arrangements have completed the entertainment features of the program, and suffice it to say that the physical, as well as the mental man will be carefully looked after. All may rest assured that nothing will be left undone to promote the comfort

and pleasure of those who are fortunate enough to be able to attend.

We sincerely hope that the coming meeting will be the largest and best in the history of the Association—there is no reason why it should not be. The benefits to be derived are not open to question; every member who attends will return to his work invigorated and filled with renewed zeal.

Let everyone who can possibly do so arrange to devote April 7, 8, 9 to the interests of his state meeting. Correctly viewed, his personal interests are also deeply concerned.

VALEDICTORY.

With this number our editorial functions terminate. In bidding adieu to our readers, candor compels the admission that we do so with a sense of relief, if not altogether without regret. The editors have labored earnestly to produce a journal which would be in keeping with the dignity and high standards of our organization, of which no member would have cause to be ashamed. If we have succeeded in any measurable degree, we are content. To the few who have given us unstintingly of their help, we desire to give assurance of our very sincere appreciation.

We shall waive the time honored custom, which is usually accorded a valedictory, to counsel and admonish, further than to say that a more zealous spirit of individual co-operation is at present among the greatest of the needs of our Association; the cultivation upon the part of our members of a feeling of personal responsibility will make of our State organization all that it should be, and is capable of being. This we bespeak for our successor—he will need your encouragement—you cannot afford to withhold it.

PROFESSIONAL EXPLOITATION.

The widespread publicity given to the alleged marvelous cures of radium, mesothorium and the allied group of radio-active substances is much to be deplored by all right-thinking physicians; and it is made all the more lamentable on account of the fact that the names of some of the most prominent members of our profession in this country have been connected with the assertions. We would not belittle what-

ever value radium has as a therapeutic agent or question the sincerity of men who are exploiting the virtues of the element, but it must be very evident to any one who will study the reports of the scientific investigators who are working with these agents, that the claims made for them in the newspapers and popular magazines are extravagant in the extreme and without foundation in fact.

As a matter of fact, there is no unanimity of opinion, as yet, as to the value of radium. The amount to be used, the length of time of the exposures to the growth, the type of lesion to which it should be applied, are all undecided and every so-called "treatment" by radium is necessarily, at this time, experimental. It has been found that the more superficial rays (the alpha and beta) given off by this element are not only of no value in the treatment of cancer, but are harmful, inasmuch as they do not penetrate the growth and set up a superficial irritation, so only the "gamma rays" are used, the others being filtered out by the use of lead, platinum or tin coverings. Again, it is known that the ratio of destruction of cells by radium varies in different types of growth and in different parts of the body; e. g., the ratio of destruction of cancer cells to normal tissue cells in the uterus is 20 to 1; on certain mucocutaneous junctions, as the lower lip, about equal in the destructive power. The most sanguine supporters do not claim a curative power when metastases have formed. So in view of these facts (and others could be quoted) it is deplorable in the extreme that it should have been spread broadcast over the land that a cure for a disease that amounts to almost a scourge has been discovered.

With the advent of the X-Ray the public and profession went through this same experience, and while this agent has a definite and almost indispensable place in medicine and surgery, the false impressions placed in the mind of the public has made it possible for less scrupulous of our profession to use the X-Ray, and other electrical agents, solely to increase their income; the only benefit the patient getting being solely psychic. Salvarsan was hailed only a few years since as an absolute cure in one dose for syphilis. This we know to be **not** so and there are, no doubt, thousands who have received this method of treatment and who

think themselves cured. Hardly a day passes that the question is not asked if one dose of this remedy will cure. The advertising quack is alert to the advantage of the popular impression and in almost every newspaper we see boldly emblazoned in black type the absurd assurances of immediate cures.

In view of the above statements it is little wonder that there is a growing unrest on the part of the public in their faith in medicine; little wonder that new "cults" and "isms" with a goodly following are born almost with every moon. Medicine and surgery will not come unto their own until they have born unto themselves a keener conscience.

News Notes and Comment

The Upper Cumberland Medical Society will hold its next meeting at Algood, May 26-27.

Dr. Frank Turney, formerly of Winchester, Tenn., has removed to Chattanooga and is now located at 601-602 James Building.

Dr. T. H. Marable was badly hurt while going down the steps of the Methodist Church Sunday night, March 8, at the close of the services. He hung his heel on the step, falling with such force that his patella, which struck the stone step, was dislocated.

Dr. R. H. Taylor, age 78, died at his home March 9, of heart failure. He was a native of Virginia and a surgeon in the Confederate army. He has been practicing medicine for fifty years. He was County Health Officer. He is survived by his wife and four sons.

The annual meeting of the State Board of Medical Examiners will be held on May 4 and 5. Examinations will be conducted in Knoxville, Nashville, and Memphis on the above dates. All applicants will be required to submit a recent photograph with certified signature for the purpose of identification.

A meeting of the Wilson County Medical Association was held March 5, with Dr. A. O. Eskew presiding, in the absence of Dr.

J. J. McFarland. Dr. R. Q. Lillard, of the State Board of Health, spoke on the smallpox situation in general over the state. A clinic was given by Dr. L. L. Tilly on "Tuberculosis." Dr. A. O. Eskew was appointed delegate, with Dr. R. Q. Lillard alternate, to the meeting of the State Medical Association, which meets at Memphis, April 6, 7, 8.

The Alumni from the University of Nashville, University of Tennessee, College of Physicians and Surgeons of Memphis, and the Memphis Hospital Medical College, now consolidated into the University of Tennessee, are arranging for an Alumni Reunion, to be held in Memphis during the meeting of the Tennessee State Medical Association. Full particulars can be obtained by writing to Mr. E. F. Turner, care University of Tennessee, Memphis, Tenn.

The Hamblen County Medical Society, which meets on the second Tuesday night of each month in the office of Drs. Shields and Carroll, of Morristown, has arranged the following interesting program for the year 1914: "Management of Normal Labor," Dr. W. G. Ruble, April 14th; "Acute Diarrhoea," Dr. L. H. Milligan, May 12th; "Can Typhoid Fever Be Aborted?" Dr. J. W. Pierce, June 9th; "Diabetes Mellitus," Dr. J. F. Campbell, July 14th; "Internal Secretions," Dr. F. F. Painter, August 11th; "Contagious Diseases," Dr. D. E. Shields, September 8th; "Acute Nephritis," Dr. J. B. F. Dice, October 13th; "Fractures," Dr. H. G. Pangle, November 10th; "Measles," Dr. T. E. Bales, December 8th; at which meeting election of officers and a banquet will be held.

County Society Proceedings

HAMILTON COUNTY.

The 779th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order November 14, 1913, by the President, Dr. H. F. Larimore, with the following members present:

Members—Drs. Y. L. and T. E. Abernathy, Meacham, E. B. Anderson, Barnett, Hilliard,

Rathmell, Broyles, N. C. Steele, Null, Holman, Long, McQuillan, Haskins, Renner, Fancher, F. T. Smith, Hillas, Wert, Wilson, Brooks, Wise, Detrich, Clements, Woolford and G. Victor Williams.

Visitors—Drs. Walker, Roberts, Brooks, and Prof. Bierly.

Minutes of the previous meeting were read and approved.

Dr. Rathmell reported case of ichthyosis of twenty-five years' duration.

Dr. Barnett had a clinic of osteo-sarcoma of Tibia in a Hindoo of two years' standing. Osteoma following an injury which had taken on sarcomatous degeneration following second injury. Case was discussed by Drs. Fancher, Haskins, and E. B. Anderson.

The following charges were preferred against Dr. O. M. Haywood by Dr. H. L. Fancher and J. H. Barnett. After being read they were referred to the Board of Censors.

To the Chattanooga Academy of Medicine and Hamilton County Medical Society:

We, the undersigned members of this Society, hereby file charges against Dr. O. M. Haywood, a member of this Society for the following reasons. He has heretofore, is now, and continues to associate himself, consult, advise and practice in an unethical, irregular and fake institution and we are informed is one of the managers of said hospital or institution and that he is protecting from criminal prosecution an unqualified and uneducated man, who is practicing medicine without license. Signed:

H. L. FANCHER,

J. H. BARNETT.

Dr. N. C. Steele then made an interesting talk on "Removals of Foreign Bodies in the Ear and Nose," which was discussed by Drs. Long, Smith, Rathmell, Haskins and Barnett.

Dr. Y. L. Abernathy then read a very interesting paper on "Habits," which included both good and bad habits, and was discussed by Drs. Clements, Smith, Steele, Rathmell, Barnett and McQuillan.

There being no further business the Society then adjourned.

The 786th regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society, was called to order at

S. P. M. November 21st, by President H. P. Larimore, with the following members present:

Members—Drs. T. E. and Y. L. Abernathy, W. M. and W. G. Bogart, Meacham, Winter, Fancher, Barnette, Yarnell, E. B. Anderson, Wallace, Shumacker, Watson, G. Manning Ellis, Hillas, Wert, N. C. Steele, Travis, Larimore, Renner, F. T. Smith, McQuillan, Green, Haskins, Allen, Holman, K. D. Davis, McManus, Blackwell, Gould, Sullivan, Williams, Hogshead and Boone.

Visitors—Capt. Gahagan, Mr. John Stagmaier, F. E. Mahoney, Drs. Wills, Walker, Roberts and Prof. Bierly.

Minutes of the previous meeting were read and approved.

Dr. Raymond Wallace and Dr. B. F. Travis, made interesting talks on the recent meeting of the Congress of North American Surgeons.

Dr. Gould made a report of three patients dying of Tuberculosis, who developed symptoms of Pellagra. Case discussed by Dr. McManus, who suggested that the symptoms were Lupus.

Capt. A. J. Gahagan, John Stagmaier and F. E. Mahoney, made interesting talks on the Tuberculosis Hospital, and invited the co-operation of every physician practicing in the county. The invitation was discussed by Drs. Travis, Smith, Haskins, Barnette and McManus.

It was moved seconded and carried, that a committee of physicians (5), be appointed by chairman to represent the Academy of Medicine in the management of the Tuberculosis Hospital, as asked for by Capt. Gahagan and his associates, on the staff of management of said hospital. Chairman asked for time in making the appointments.

Dr. E. P. Gould, the essayest of the evening, read a short interesting paper on the "Diagnosis of the Diseases of the Skin," which was discussed by Dr. Winters, Haskins, McQuillan, Sullivan, McManus, Fancher and Barnette.

There being no further business the Society adjourned.

The 781st regular meeting of Chattanooga Academy of Medicine, was called to order at 8 P. M. November 28th, 1913, by the President, H. P. Larimore, with the following visitors and members present:

Visitors—Prof. Bierly, and Dr. Herring of Baltimore, who made a short talk and complimented the Society for its interest and attendance.

Members—Drs. Rathmell, W. G. Bogart, Meacham, Yarnell, E. T. Newell, Richardson, Brooks, Barnett, Blackwell, Haskins, Wallace, Fancher, Hillias, Hogshead, Y. L. Abernathy, Wm. Bogart, W. E. Anderson, N. C. Steele, J. M. Broyles, Albert Broyles, Fletcher, Horton, Hochstetter, Barrett, McQuillan, Fowler, Dunbar Newell, Wert, E. B. Anderson, J. B. Steele, Gould, Long, F. S. Smith, Larimore and G. Victor Williams.

Minutes of the previous meeting were read and approved.

President Larimore announced the following as committee for Pine Breeze Tuberculosis Sanitarium: Y. L. Abernathy, Chairman; J. W. Horton, W. G. Bogart, John B. Steele, T. E. Abernathy.

It was moved seconded and carried that we ask the commissioner of health, Hon. H. Clay Evans for his opinion as to having prostitutes examined and report back to the Society his answer.

Dr. Raymond Wallace made an interesting case report of a case with protrusion through uterus, cervix, vagina and vulva of the omentum. Fetus and Placenta had been expelled and abdominal cavity filled with blood. Pregnancy had taken place five months previous in this woman, who was a primiparae.

Case was discussed by Drs. Horton, Broyles, Barnette and Bogart.

Dr. Albert C. Broyles, the essayest of the evening, read an interesting paper on the Intestinal Diseases of children, which was discussed by Drs. Wert, Fletcher, Barnette. Discussion was closed by the essayests.

Dr. J. M. Hogshead then displayed a series of interesting charts illustrating his talks of diseases and treatment of the Nasal Accessory Sinuses. Discussion was opened by Dr. Steele, continued by Dr. Long, Dr. Steele, Fancher, Barnette and Larimore, and closed by Dr. Hogshead.

Election of Officers was announced as the program for next meeting and the Society adjourned.

The 782nd regular meeting of the Chatta-

nooga Academy of Medicine and Hamilton County Medical Society was called to order by the President, H. P. Larimore, with the following members and visitors present:

Members—Drs. Wise, Rathmell, Cobleigh, Bogart, Meacham, Renner, Blackwell, Larimore, G. Manning Ellis, Wert, J. M. Broyles, Y. L. and T. E. Abernathy, Long, Reisman, Brooks, Shumacher, Dunbar Newell and Ed Newell, Atlee, John B. Steele, Fletcher, Wallace, Woolford, Sullivan, Fancher, Dietrich, Vigle, W. E. Anderson, West, Yarnell, Ghee, Fowler, Hogshead, Barnette, Cunningham, McManus, Peay, Wagner, Stem, Hillias, Allen, Haskins, Clements, Snapp, Williamson, Smith, Ingalls, Holman, Wilson, Hilliard, Boone and G. Victor Williams.

Visitors—Walker, Dickey, Randall and Roberts.

Minutes of the previous meeting were read and approved.

Dr. Yarnell, Chairman of the Board of Censors, reported that Dr. O. M. Haywood had severed his connections with the Chattanooga Skin and Cancer Hospital, and they recommended that the charges be withdrawn. It was moved seconded and carried that the charges against Dr. Haywood be withdrawn.

Dr. Dunbar Newell reported case of twisted Ovarian Cyst, which caused intense pain under left costal arch.

Dr. Fancher reported case of Tubal Pregnancy with pain and hemorrhage in adhesions and unruptured tube.

Dr. Wallace and Stem made a report on the case of Rupture of Uterus, which Drs. Wallace and Horton reported at last meeting. Case was discussed by Drs. E. B. Anderson and Dunbar Newell.

It being the first meeting in December we held an election of officers for the coming year 1914, which resulted as follows: President—W. G. Bogart, 37; Hillias, 1; Ed Newell, 2; W. G. Bogart, 1; T. E. Abernathy, 1; Wallace, 2; Peay, 1; Barnette, 1. Vice-President—E. B. Anderson, 30; Sullivan, 1; T. E. Abernathy, 11; Fowler, 3; McQuillan, 1; Fletcher, 1; Fancher, 4; E. T. Newell, 2; Barnette, 2; Wert, 1; Ghee, 1; Wallace, 1; Broyles, 1. Secretary-Treasurer—G. Victor Williams, 42; Larimore, 5; Richardson, 1; Ghee, 2; Hogshead, 1. Board

of Censors for 3 years—S. I. Yarnell, 37; Frank Trester Smith, 6; J. B. Steele, 1; Woolford, 24; West, 2; Ingalls, 1; Geel, 1; Wisel, 1. Williams and Samuel I. Yarnell, having received a majority of all votes cast, were declared elected for President, Vice-President, Secretary-Treasurer, and members of Board of Censors respectively.

Interesting case reports were made by T. E. and Y. L. Abernathy, McManus, Barnette, West, Bogart, Ingalls, and Stem.

President elect, W. M. Bogart, announced banquet. Committee as follows: E. B. Wise, Chairman; H. L. Fancher, Dunbar Newell, Dr. W. M. Bogart, E. B. Anderson, G. Victor Williams.

There being no further business the Society then adjourned.

The 783rd regular meeting of the Chattanooga Academy of Medicine and Hamilton County Medical Society was called to order at 8 P. M. December 12th, by the President, H. P. Larimore, with the following members and visitors present.

Visitors—Drs. Dickey, Randall, Roberts and Walker.

Members—Drs. W. M. and W. G. Bogart, Renner, Blackwell, Barnette, Rathmell, Smith, Fancher, Null, Wise, Hochstetter, Cobleigh, Haskins, Ingalls, E. B. Anderson, Sullivan, Boone, Green, Fletcher, Wallace, West, Ellis, Allen, Long, Broyles, Reisman, Wert, Dunbar and Ed Newell, Travis, Fowler, McQuillan, T. E. and Y. L. Abernathy, J. W. Johnson, Larimore and G. Victor Williams.

The minutes of the previous meeting were read and approved.

Dr. Travis, Chairman for the Finance Committee for visiting, Eye, Ear, Nose and Throat Specialists, reported as follows: Receipts, \$535.00; Disbursement, \$484.00; Balance, \$50.00.

It was moved seconded and carried that the balance be turned over to the banquet committee.

Dr. J. E. Hanna's letter of resignation read and accepted.

President elect, W. M. Bogart, announced the following committees:

Program—H. P. Larimore, Chairman; G.

Victor Williams, B. S. Wert, E. T. Newell.

Press Committee—Y. L. Abernathy, Chairman; B. Sullivan, C. Holtzelaw, Raymond Wallace, Geo. R. West.

Memberships—Frank Trester Smith, Chairman; H. Q. Fletcher, J. C. Brooks, W. H. Cheney, J. B. Steele.

Legislative—J. R. Rathmell, Chairman; T. E. Abernathy, J. B. Haskins, H. Berlin, N. C. Steele.

Dr. E. T. Newell had a clinic of two patients, one Suppurating Inguinal Adenitis operated on 5 days ago, 1-41 per cent Novocain, Iodoform Emulsion, 10 per cent was injected and closed with collodion. The other patient was a case of Epididimitis, who denied any gonorrheal urethritis, but a urethral discharge was found on morning after operation. These two cases were discussed by Drs. E. B. Anderson and Cobleigh.

Dr. Jas. E. Green presented a beautiful specimen of two twin pregnancy. One foetus showed about 10 weeks' development and the other 5 1-2 months each in separate amniotic sack and one placenta. Case was discussed by Drs. Ed Newell, Barnette, Wise and Bogart.

Dr. Green also reported case of Hemorrhagic Smallpox in woman who had a good scar from vaccination. There was Hemorrhagic eruption in papular stage with Bronchial, Uterine and Rectal hemorrhage. Case terminated fatally.

Dr. Wert reported interesting case of Miscarriage in which the afterbirth remained in uterus and vagina. Case discussed by Drs. E. B. Anderson, McQuillan and Broyles.

Dr. J. B. Haskins reported case Hyperthyroidism, which was recovering rapidly since tying the superior thyroids. Case discussed by Drs. W. G. Bogart, Dunbar Newell, Barnette and Fancher.

There being no further business the Society adjourned.

G. Victor Williams, M. D.,
Secretary.

RUTHERFORD COUNTY.

The Rutherford County Medical Society met at the office of Dr. E. H. Jones, in Murfreesboro, March 4th, 1914.

The Society was called to order by the

President, Dr. E. M. Holmes, the minutes of the last meeting were read and approved. The essayists not being present, the report of cases was taken up. Dr. R. W. Reed reported a case of compound comminuted fracture of the leg, in which a large part of the tibia and fibula had been crushed into many small pieces. The leg was saved and the cured case, a middle-aged man, walked before the Society.

Dr. E. H. Jones reported a similar case in which he had gotten like results. These cases were liberally discussed by those present.

Dr. S. C. Grigg suggested the importance of the members of this Society meeting regularly and promptly at 2 o'clock. The Society adjourned.

The following members were in attendance: S. C. Griggs, R. W. Reed, E. H. Jones, E. M. Holmes, M. B. Murfree, B. N. White, Rufus Pitts.

RUFUS PITTS, M.D., Secretary.

Since publication of New and Non-Official Remedies, the following articles have been accepted for inclusion with "N. N. R.:"

Note: A copy of N. N. R., 1914, will be sent in a few days. Hereafter each monthly letter will contain a list of all the articles which have been accepted since publication of N. N. R., 1914. The articles are arranged according to the names of the manufacturer or American agent. Those accepted during the current month will be made prominent by the use of capitals.

Farbwerke Hoechst Co.: AMPHOTROPIN.
Fairchild Bros. & Foster: TRPYSIN.

Hynson, Westcott & Co.: Phenolsulphonephthlein, H. W. & Co.; Phenolsulphonephthlein Ampoules, H. W. & Co.

H. K. Mulford Co: Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Disinfectant Krelon, Mulford; Salicylos; Staphylo-Serobacterin; Strepto-Serobacterin; Typho-Serobacterin.

Essence of Pepsin, Fairchild: While in my letter, dated December 31st, 1913, I advised that the Council had agreed to the request of Fairchild Bros. & Foster that the product, "Essence of Pepsin, Fairchild," be described in N. N. R. under the new name, "Pepsencia," the Council later reconsidered this ac-

tion. The product is included in N. R. R., 1914, on page 110, under its old title, "Essence of Pepsin, Fairchild."

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-Official Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non Official Remedies:"

Serobacterins.—Serobacterins are emulsions of bacteria which have been treated by the application of the corresponding specific immune serum. Bacteria as treated are supposed to contain specific amboceptors so that immediate union with the complement of the patient's serum is said to occur. Hence, their action is supposed to be more rapid than that of ordinary vaccines. They are also said to be free from the negative phase and the general and local reactions produced by ordinary vaccines.

Staphylo-Serobacterin, Mulford.—This is a sensitized Staphylococci Vaccine. H. K. Mulford Co., Philadelphia, Pa.

Strepto-Serobacterin, Mulford.—This is a sensitized Streptococci Vaccine. H. K. Mulford Co., Philadelphia, Pa.

Typho-Serobacterin, Mulford.—This is a sensitized Typhoid Vaccine. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 7, 1914, page 457).

Disinfectant Krelol, Mulford.—A solution of cresols or higher phenol homologues and rosin soap. The phenol coefficient, ranging from 5 to 7, is stated on the label. It is an antiseptic, germicide and deodorant. Mulford Antiseptic Krelol is an almost black liquid, having a cresol-like odor forming a milk-like emulsion with water. The H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 14, 1914, page 537).

Anti-Anthrax Serum, Mulford.—It is prepared by immunizing horses against virulent anthrax bacilli. H. K. Mulford Co., Philadelphia, Pa.

Antistreptococci Serum Scarlatinal, Polyvalent, Mulford.—The serum of horses treated with streptococci taken from scarlet fever

patients. The H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 14, 1914, page 537).

Corpus Luteum, Capsules.—Each capsule contains desiccated corpus luteum, Armour 0.3 gm. Armour & Co., Chicago.

Corpus Luteum, Tablets.—Each tablet contains desiccated corpus luteum, Armour 0.13 gm. Armour & Co., Chicago (Jour. A. M. A., Feb. 21, 1914, page 615).

Granular Effervescent Salicylos.—Each 100 gm. contain strontium salicylate 6.54 gm., ammonium salicylate 6.54 gm., with an effervescing base of sodium bicarbonate, citric acid and tartaric acid. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 21, 1914, page 615).

Amphotropin.—Hexamethylenamin camphorate, a compound of hexamethylenamin and camphoric acid. It combines the action of camphoric acid and hexamethylenamin, but is claimed to be free from the subjective gastric disturbances produced by camphoric acid and to be effective in smaller doses. It may be given dissolved in water, or as Amphotropin Tablets containing 0.5 gm. Farberwerke Hoechst Co., New York (Jour. A. M. A., Feb. 28, 1914, page 697).

Propaganda for Reform.

Sal Hepatica.—Sal Hepatica, marketed by the Bristol-Myers Co., New York, has been refused recognition by the Council on Pharmacy and Chemistry because its composition is secret, because it is advertised indirectly to the public for the treatment of diseases, because exaggerated and unwarranted claims are made for its therapeutic qualities, and because its name fails to indicate its chief constituents, but does suggest its use in liver disorders. The Council authorized publication of its report because the exploitation of Sal Hepatica is an important illustration of the way in which physicians are being made parties to the introduction to the public of a patent medicine the indiscriminate use of which must often have resulted in harm, direct or indirect (Jour. A. M. A., Feb. 7, 1914, page 472).

Orrin Robertson and His Seven Sacred Oils.—Robertson is a quack at present located at Arkansas City, Kansas, who claims to remove

gallstones by means of "Seven Sacred Oils which grow in seven different climes." For the oil he claims "One oil acts specifically upon the entire head and throat. One oil acts directly upon the esophagus. One oil acts directly upon the stomach." And so it goes, each oil acting a little lower down, until we reach the seventh oil, which "acts directly" on the rectum. Robertson also exploits a cure for cancer. (Jour. A. M. A., Feb. 7, 1914, page 473).

Mu-col.—"Mu-col for Cleansing Mucous Membranes" is a nostrum put out by the Mu-col Company (Inc.), Buffalo, N. Y. The following claims are made: "Mu-col obtains most gratifying results in catarrhal inflammations of the mucous membranes. Leucorrhoea, Tonsillitis, Sore Throat, Cystitis, Internal Hemorrhoids, Nasal Catarrh and Pus Cases respond at once to irrigations with Mu-col solution. Strong solutions of Mu-col have proven of sterling value in treating Hives, Prickly Heat, Ivy Poison, Sunburn, Eczema, Typhoid and Scarlet Fever." Examination in the A. M. A. Chemical Laboratory showed Mu-col to be a mixture of sodium chlorid and borax, equal parts, with the addition of a small amount of aromatic substances (Jour. A. M. A., Feb. 7, 1914, page 474).

Piorkowski Laboratories Not Licensed.—The Public Health Service announces that statements which seem to emanate from the so-called Piorkowski Laboratories in various parts of the country to the effect that these laboratories have been licensed by the U. S. Public Health Service are incorrect. Instead, after inspection, a license has been refused the Piorkowski Laboratories of Berlin, Germany (Jour. A. M. A., Feb. 14, 1914, page 533).

Pyo-atoxin. A box of Pyo-atoxin was submitted to the A. M. A. Chemical Laboratory for examination. The box contained thirty black capsules having the appearance of some of the popular gonorrhoea nostrums. While the synonym, "Pheno-Methylene-Formate," suggested that Pyo-atoxin was a definite chemical substance, the examination indicated that the powder contained in the capsules was a mixture of hexamethylenamin and methylene blue—two well known drugs, the value and limitations of which are known to the

medical profession. Pyo-atoxin is sold by H. O. Hurley, Louisville, Ky., and is said to be "An Antitoxin Agent Indicated in Gonorrhoea, Cystitis, Pyelitis and Bacteriuric Conditions" (Jour. A. M. A., Feb. 14, 1914, page 552).

Hex-a-lith.—Hex-a-lith put out by the Smith-Dorsey Co., Lincoln, Neb., is said to be a combination of hexamethylenamin and lithium citrate. As lithium citrate has a tendency to render the urine alkaline and since hexamethylenamin acts only in an acid medium, the constituents of this preparation are physiologically incompatible (Jour. A. M. A., Feb. 14, 1914, page 555).

When Is a Patent Medicine?—While some physicians and especially some medical journals have trouble in classifying certain proprietary medicines drug departments in department stores find the problem a simple one. In recent Chicago newspapers advertisements for Fellow's Syrup of Hypophosphites, Glycethymolin and Sal Hepatica look perfectly at home with Peruna, Circus Liniment and Beecham's Pills (Jour. A. M. A., Feb. 21, 1914, page 631).

Lucile Kimball Obesity Cure.—Lucile Kimball of Chicago comes to the obese with the message, "I can make your fat vanish by the gallon." All that is needed, she says, is to take her treatment—no dieting, exercise or drugs are needed. The treatment consists of pink pills, which are reported to contain red pepper, menthol and bitters, probably gentian or quassia; brown tablets which the chemists declared to be an old-fashioned cathartic pill, and a powder, reported to consist of soap, Epsom salt and washing soda (Jour. A. M. A., Feb. 21, 1914, page 631).

Louisenbad Reduction Salt.—This is a white powder sold by Karl Landshut, Chicago, and is to be used dissolved in a bath. The A. M. A. Chemical Laboratory reported the powder to be composed of sodium sulphate, sodium chlorid and potassium chlorid. It is hardly necessary to say that taking a bath in a tubful of water in which a tablespoonful of the mixture has been dissolved would have no other effect than that obtained from bathing in the same amount of water without the mixture (Jour. A. M. A., Feb. 21, 1914, page 632).

Effect of Tartrates.—Many of the organic acids, such as citric and acetic, are burned up in the body, giving rise to carbon dioxide and water; thus sodium citrate, for instance, acts just like sodium carbonate in the organism. On the other hand, tartaric acid and its salts are, for the most part, not destroyed in the body and leave it in their original form, and animal experiments have shown that large doses of tartrates may give rise to symptoms of nephritis. However, while the claim made for a certain baking powder that the tartaric acid of cream of tartar in it is "wholesome" is evidently unwarranted, W. Post has shown that in the doses in which tartrates in the form of purgative mixtures, etc., is ordinarily given are probably without harmful effects (Jour. A. M. A., Feb. 21, 1914, page 616).

Administration of Lecithin.—It has been shown many times that phosphorus in the form of organic compounds as it occurs in milk or in eggs probably changes in the body to phosphate and is subsequently elaborated into lecithin. In view of this there would seem to be no physiologic or biologic reason for preferring isolated lecithin as a medication to milk or eggs. If it is believed that lecithin is indicated, the administration of one or two raw, or even cooked, yolks of eggs will supply all the lecithin that could be metabolized and presents it in a better manner than an artificial preparation (Jour. A. M. A., Feb. 21, 1914, page 615).

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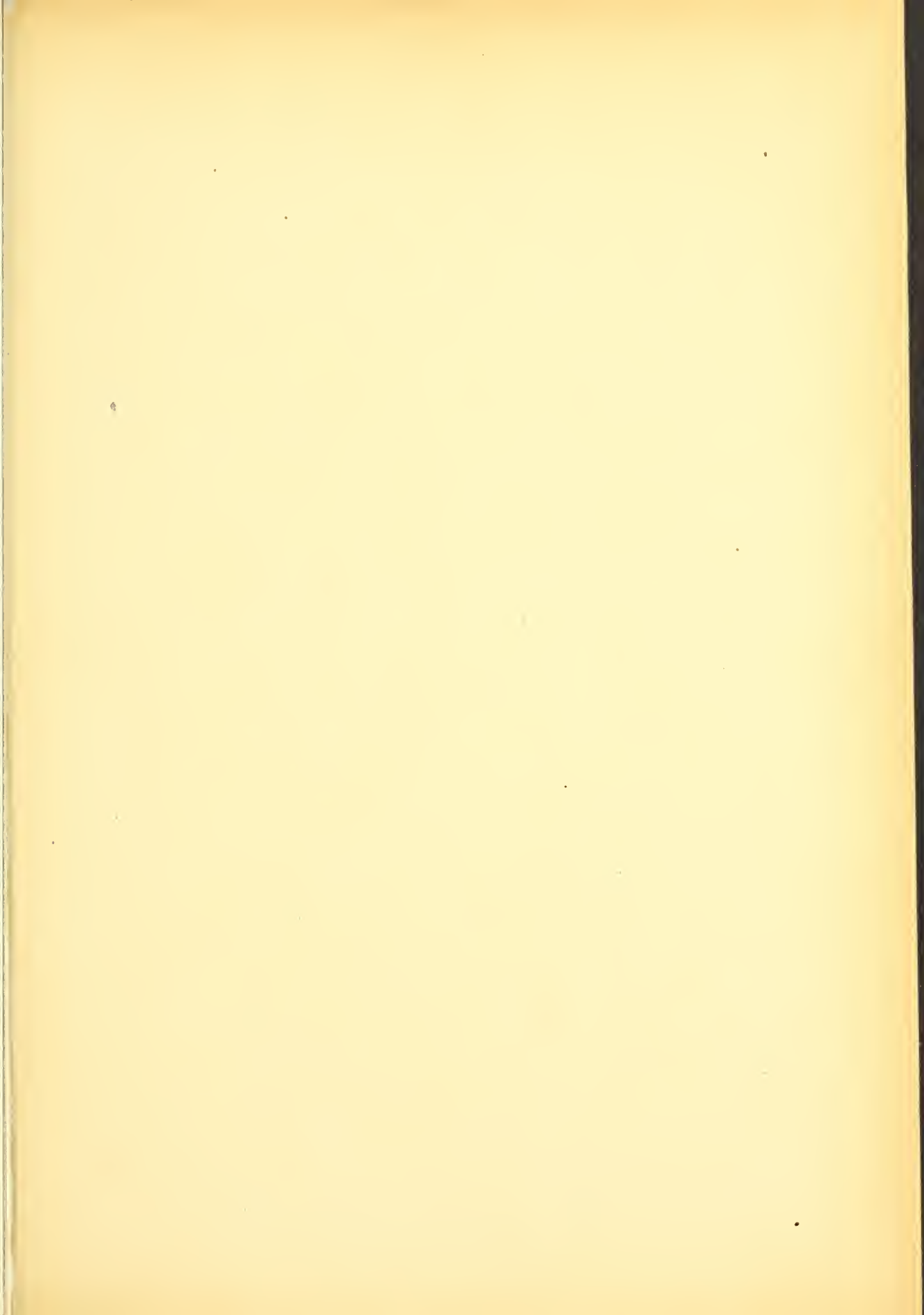
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